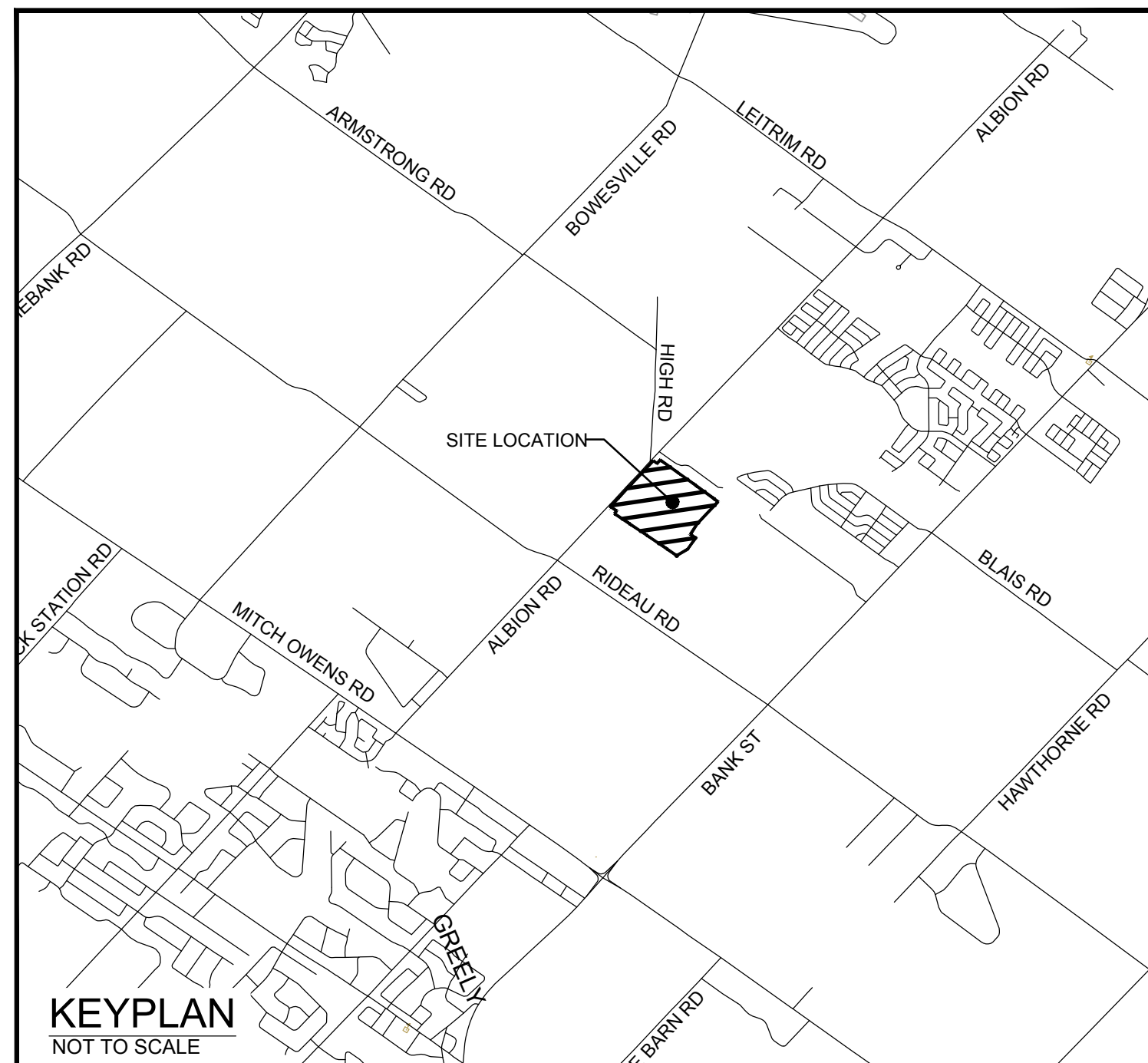


# HARD ROCK OTTAWA

4837 ALBION ROAD,  
CITY OF OTTAWA

ROADS, SEWERS AND WATERMAINS



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PROJECT No. 116111

REVISED PER CITY COMMENTS

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### STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740 OR SC-310.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418-16 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
  - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
  - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR "CREEP" MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
  - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

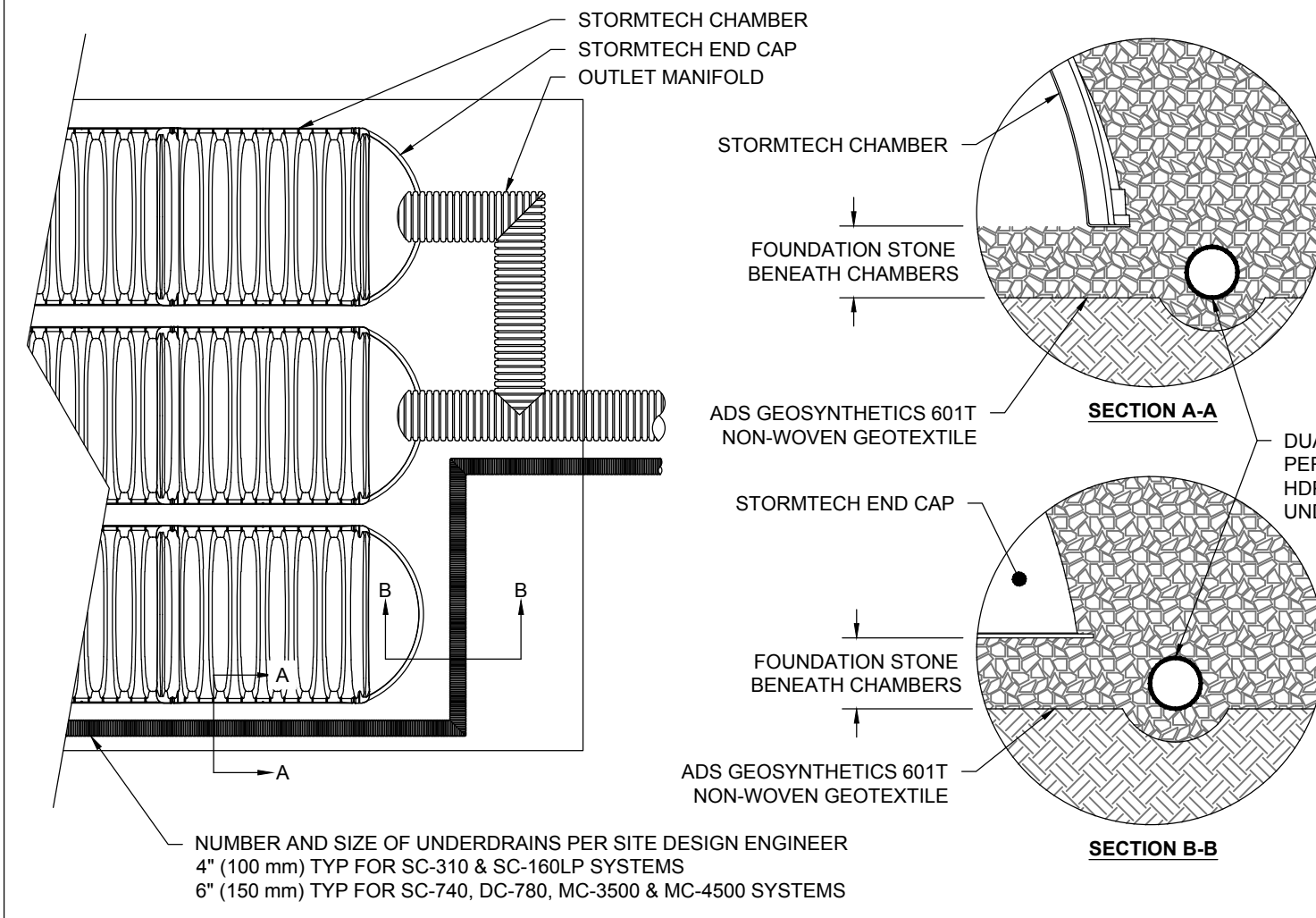
### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONESHOOTER LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4"-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

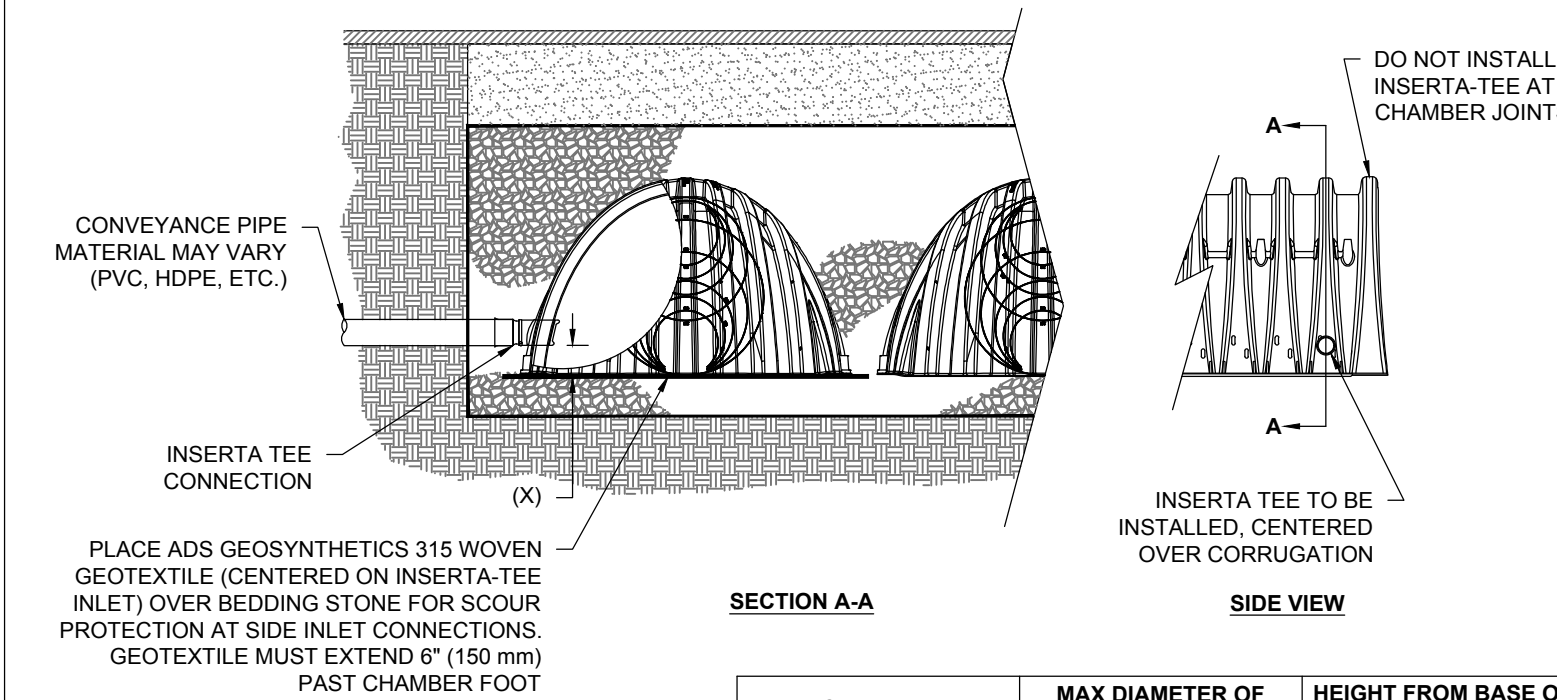
### NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER TREADED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

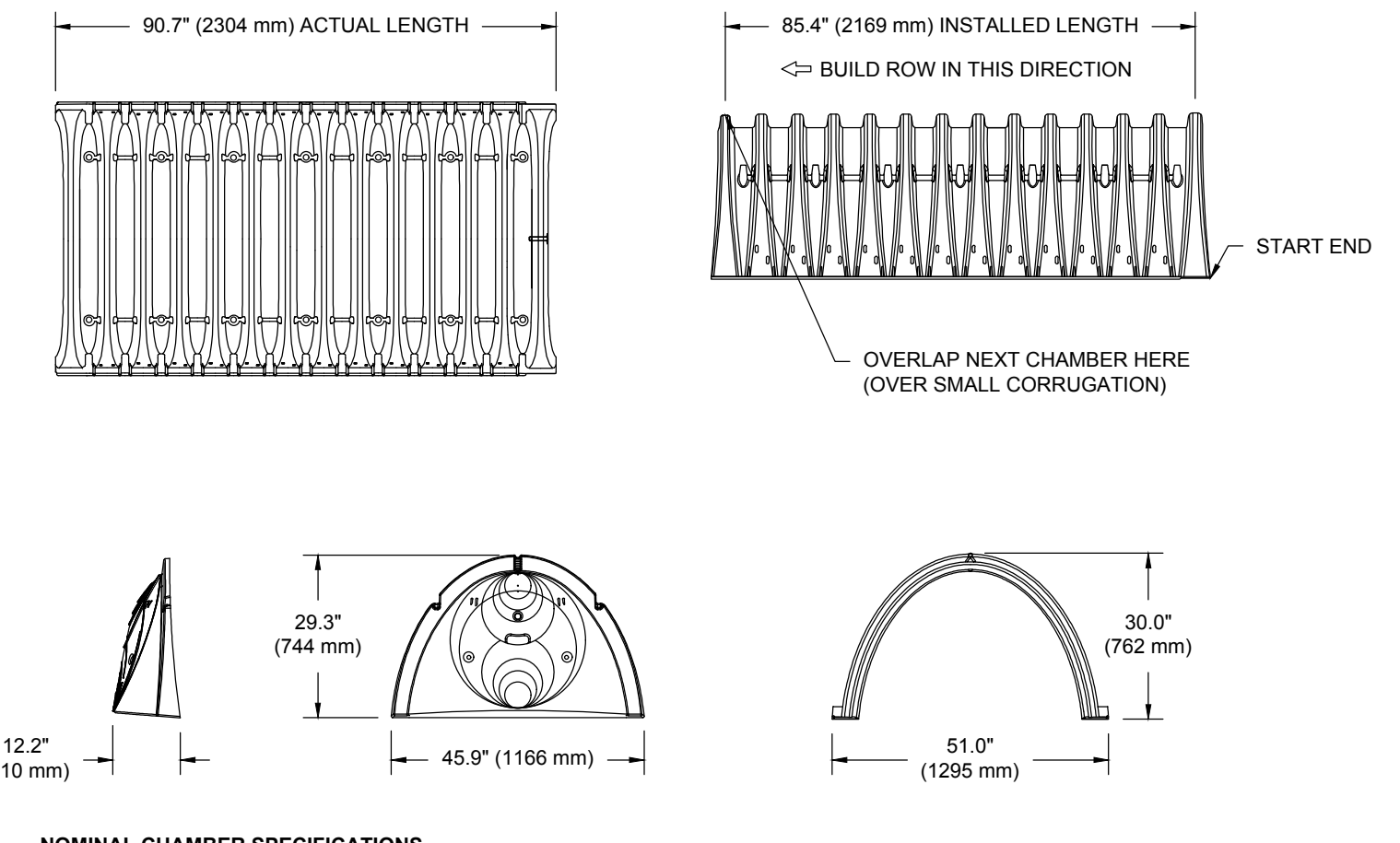


### 5 UNDERDRAIN DETAIL



CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)

NOTE: PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
51.0" X 30.0" X 85.4"	45.9 CUBIC FEET (1.30 m³)	74.9 CUBIC FEET (2.12 m³)	75.0 lbs (33.8 kg)
(1295 mm X 762 mm X 2169 mm)			

\*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06PC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE08T / SC740EPE08PC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	0.5" (13 mm)
SC740EPE10T / SC740EPE10PC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.6" (15 mm)
SC740EPE12T / SC740EPE12PC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE15T / SC740EPE15PC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE18T / SC740EPE18PC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE24T	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

\* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

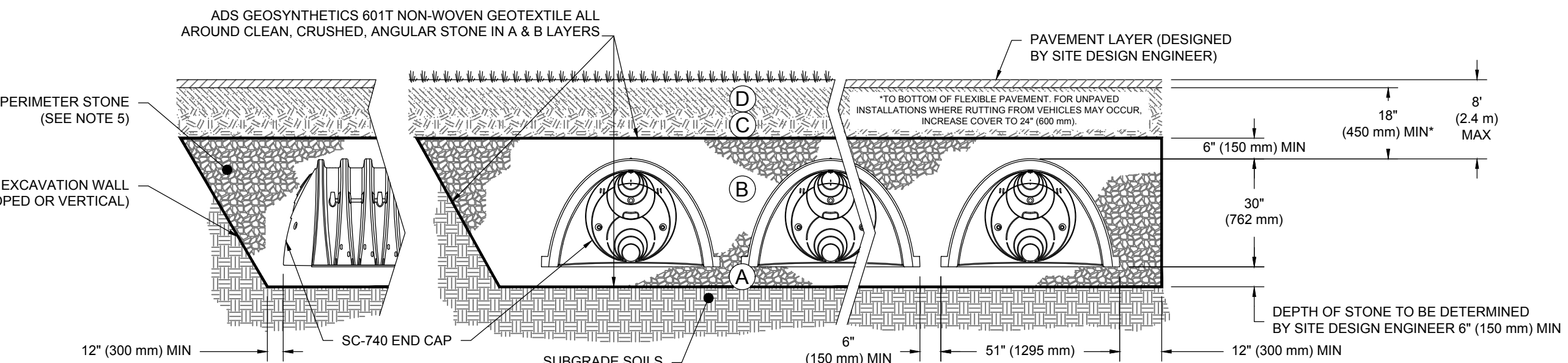
NOTE: ALL DIMENSIONS ARE NOMINAL.

### 2 SC-740 TECHNICAL SPECIFICATIONS

### ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2, A-3 OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 20,000 lbs (89 kN).
B	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACTION OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

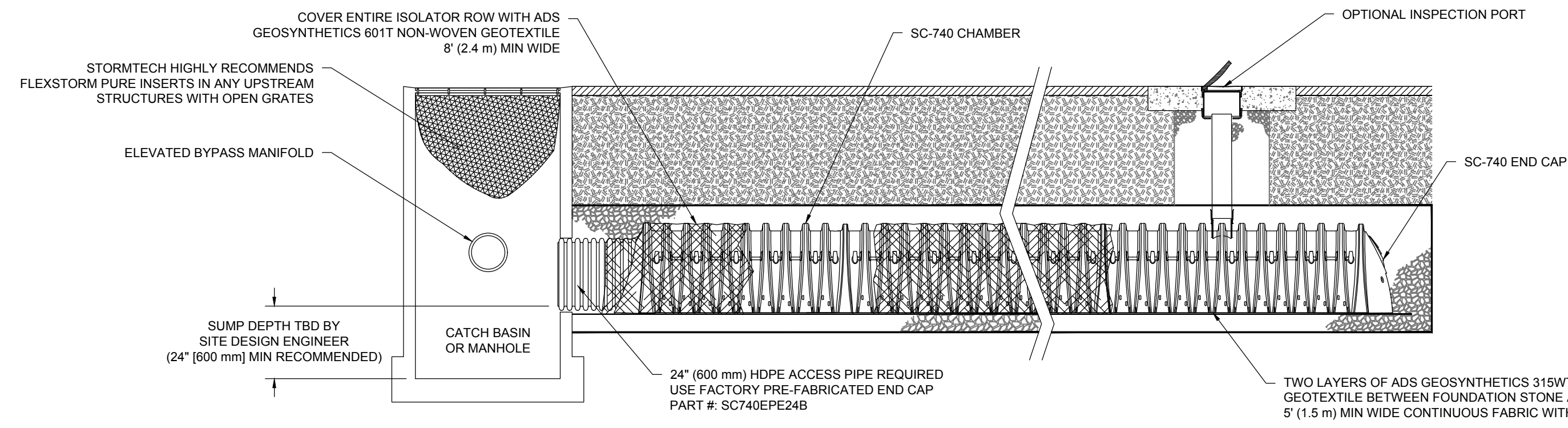
- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE.
  - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERSAGES WITH A VIBRATORY COMPACTOR.
  - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAAGING WITHOUT COMPACTION EQUIPMENT, FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



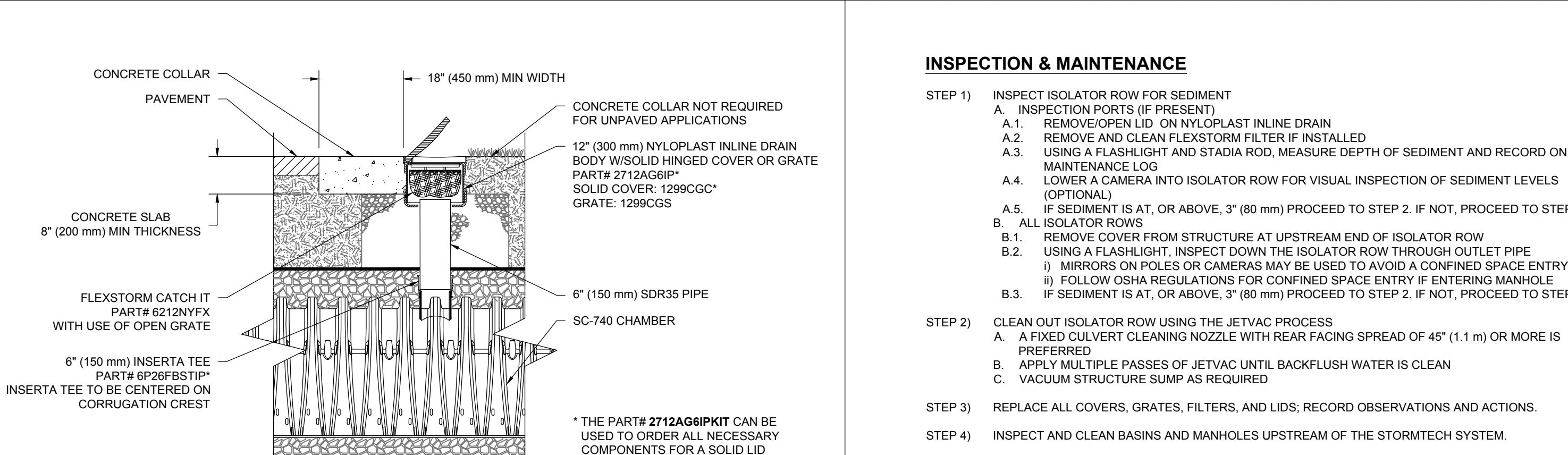
### NOTES:

- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

### 1 SC-740 CROSS SECTION DETAIL



### 3 SC-740 ISOLATOR ROW DETAIL



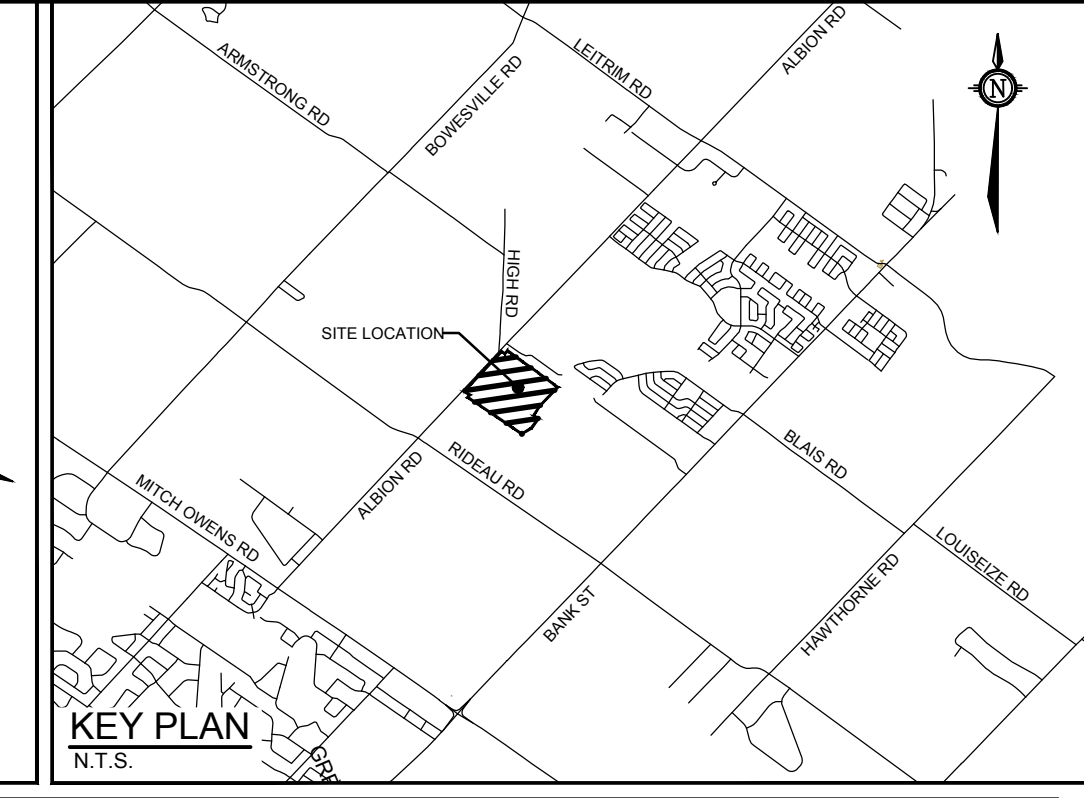
### NOTES:

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

### 4 SC-740 6" (150 mm) INSPECTION PORT DETAIL

NOTE:  
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

NOVATECH Engineers, Planners & Landscape Architects Suite 200, 240 Michael Cowland Drive Ottawa, Ontario, Canada K2M 1P6 Telephone: (613) 254-9643 Facsimile: (613) 254-5867 Website: www.novatech-eng.com	<p>SCALE: AS NOTED</p> <p>FOR REVIEW ONLY</p> <p>PERSON: MJH, CJR, MJR, CJR, JLS</p> <p>DATE: APRIL 24/20, NOV 20/19</p> <p>LOCATION: 4837 ALBION ROAD, CITY OF OTTAWA, HARD ROCK OTTAWA</p> <p>DRAWING NAME: NOTES AND DETAILS STORMTECH CHAMBERS</p> <p>PROJECT NO.: 116111</p> <p>REV #3</p> <p>DATE: APRIL 24, 2020</p> <p>PROJECT NO.: 116111</p> <p>NOT TO SCALE</p>
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NORTH

TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS

**LEGEND**

- PROPERTY LINE
- EXISTING STRUCTURE/LIGHT POST REMOVALS
- REMOVAL/ABANDONMENT OF EXISTING SEWERS
- EXISTING HYDRO REMOVALS
- ASPHALT REMOVAL (FULL DEPTH)
- CONCRETE SIDEWALK REMOVAL
- CURB REMOVAL
- EXISTING UTILITY POLE CW GUY WIRES
- EXISTING WATERMAIN CW VALVE & VALVE CHAMBER
- EXISTING HYDRANT CW VALVE & LEAD
- EXISTING SANITARY MANHOLE & SEWER
- EXISTING STORM MANHOLE & SEWER
- EXISTING CATCHBASIN
- EXISTING GAS MAIN
- EXISTING OVERHEAD WIRES
- EXISTING BELL LINE
- EXISTING HYDRO
- EXISTING STREETLIGHT

**REMOVALS NOTES:**

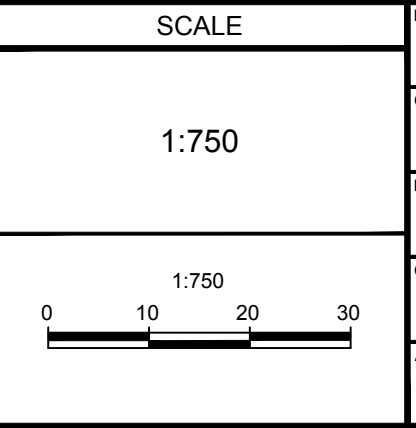
1. OBTAIN ALL APPROVALS AND PERMITS FROM THE CITY OF OTTAWA PRIOR TO ANY REMOVAL WORK OR CONSTRUCTION.
2. ALL STORM STRUCTURES AND PIPES WITHIN THE PROPOSED BUILDING AREA TO BE REMOVED AND DISPOSED OF OFF SITE.
3. ALL STORM PIPES OUTSIDE THE BUILDING AREA TO BE ABANDONED PER CITY OF OTTAWA STANDARD DETAIL S11.4.
4. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT IN POINTS PER CITY OF OTTAWA STANDARD DETAIL R19.



NOTE:  
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**NOT FOR CONSTRUCTION**

NO.	REVISION	DATE	BY
5	REVISED AS PER CITY COMMENTS	MAR 03/23	MJH
4	DESIGN DOCUMENTS PACKAGE	NOV 15/22	MJH
3	REVISED AS PER CITY COMMENTS	NOV 08/22	MJH
2	REVISED AS PER CITY COMMENTS	APRIL 24/20	CJR
1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR



FOR REVIEW ONLY	
DESIGN	MJH
CHECKED	CJR
DRAWN	MJH
CHECKED	CJR
APPROVED	JLS

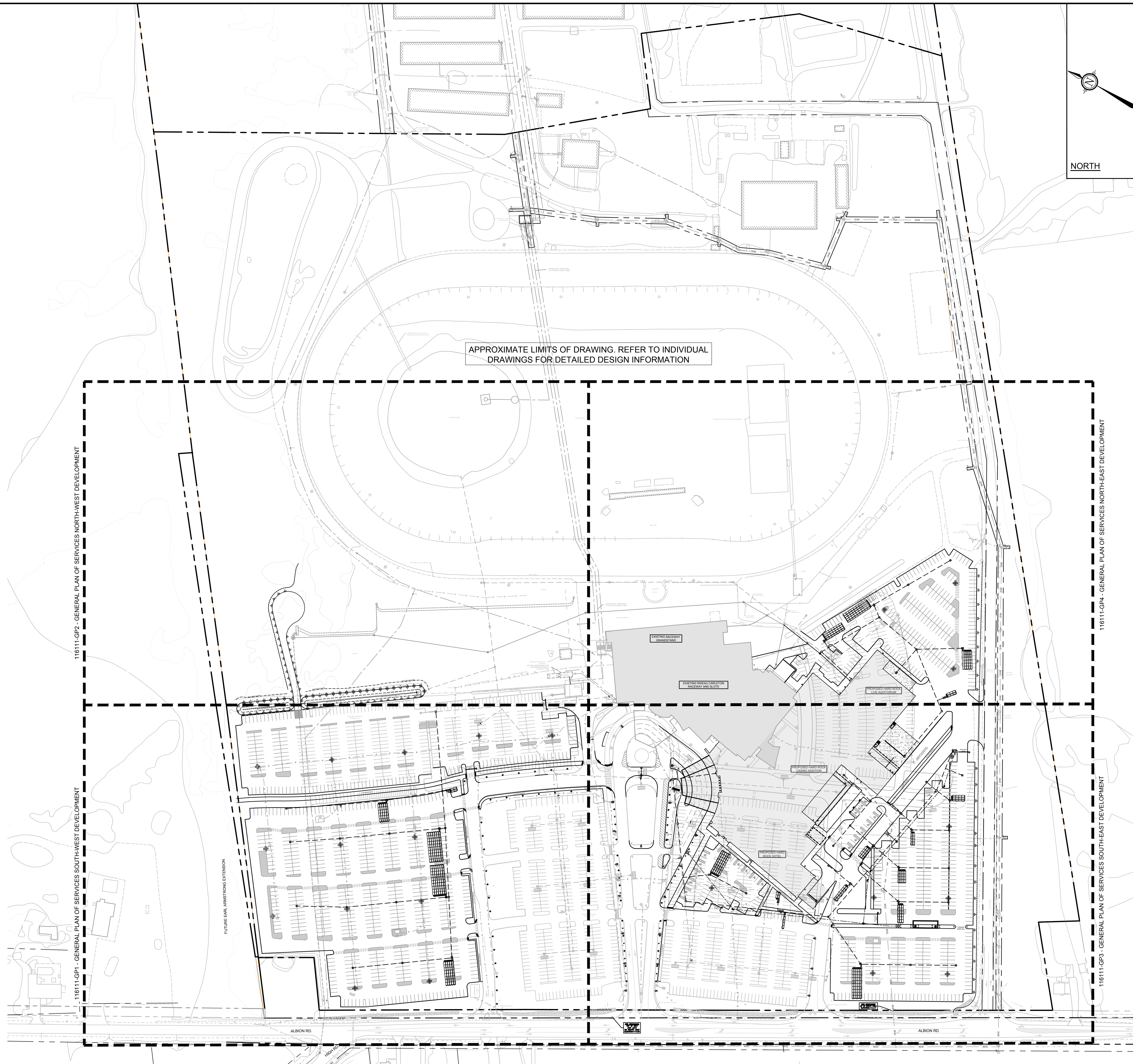


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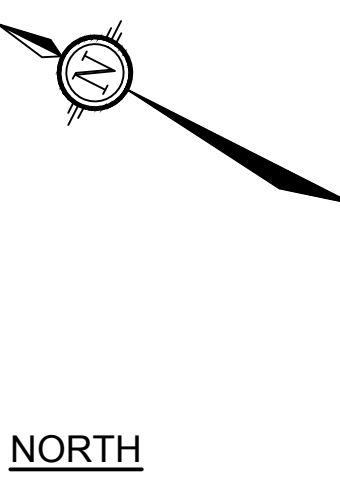
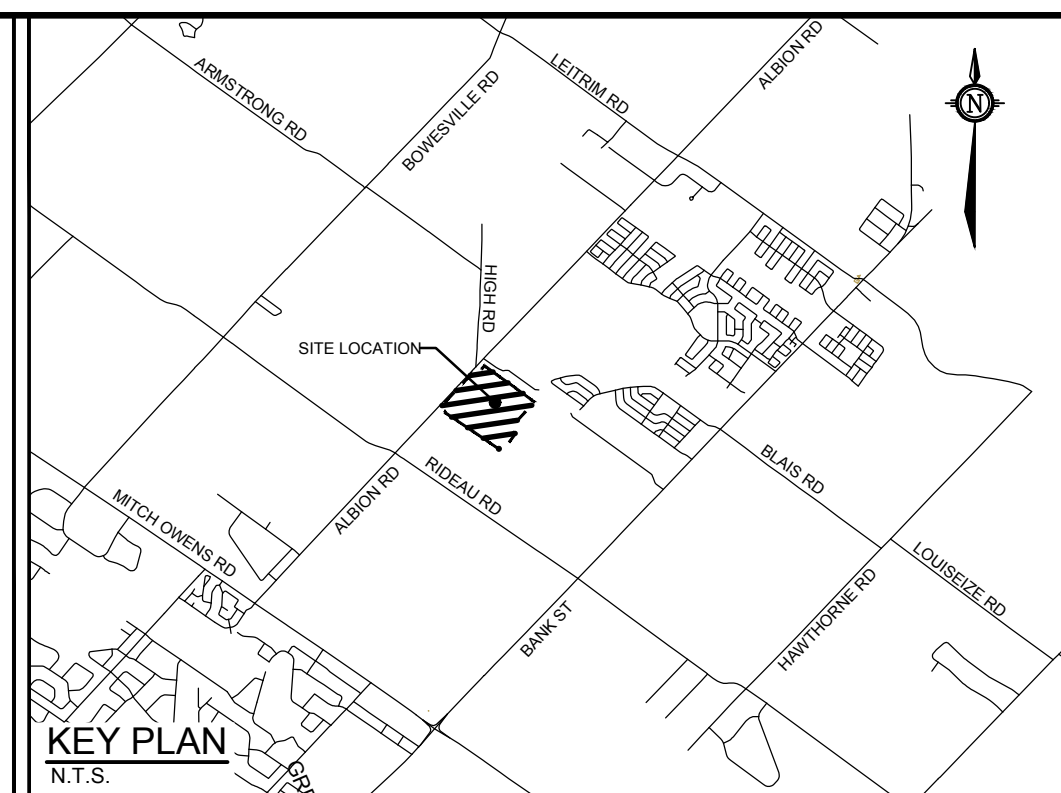
LOCATION 4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA	PROJECT NO. 116111
DRAWING NAME REMOVALS AND DEMOLITION PLAN	REV # 5
	DRAWING NO. 116111-REM

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DOT-12-19-0191



APPROXIMATE LIMITS OF DRAWING. REFER TO INDIVIDUAL DRAWINGS FOR DETAILED DESIGN INFORMATION



**LEGEND**

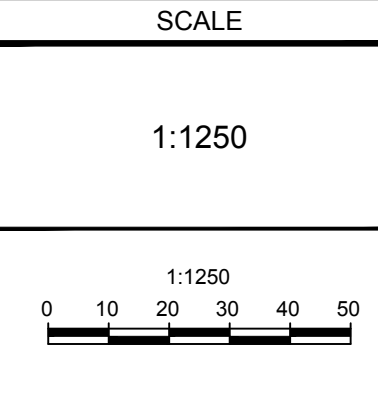
- PROPERTY LINE
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- PROPOSED RETAINING WALL
- PROPOSED PRECAST CONCRETE CURB (O.P.S.D. 803.320)
- TACTILE WALKING SURFACE INDICATOR (TWSI) PER CITY DETAIL SCT. 3
- PROPOSED CAP
- PROPOSED CROSSWALK PAINTING
- PROPOSED PARKING PAINTING
- PROPOSED SANITARY SERVICE c/w MANHOLE
- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED BUILDING ENTRANCE
- DIRECTION OF FLOW
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED INLET CONTROL DEVICE
- PROPOSED CATCHBASIN
- PROPOSED UNDERGROUND STORAGE WITH GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
- PROPOSED UNDERGROUND STORAGE WITHOUT GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
- PROPOSED LIGHT POST FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
- DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
- LIGHTING BOLLARD (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
- CONCRETE BOLLARDS
- HYDRO TRANSFORMER (REFER TO ELECTRICAL PLAN)
- GENERATOR (REFER TO ELECTRICAL PLAN)
- ELECTRICAL MANHOLE (REFER TO ELECTRICAL PLAN)
- EXISTING UTILITY POLE c/w GUY WIRES
- EXISTING WATERMAIN c/w VALVE & VALVE CHAMBER
- EXISTING HYDRANT c/w VALVE & LEAD
- EXISTING SANITARY MANHOLE & SEWER
- EXISTING SANITARY FORCEMAIN
- EXISTING STORM MANHOLE & SEWER
- EXISTING CATCHBASIN
- EXISTING INFILTRATION CHAMBERS
- EXISTING GAS MAIN
- EXISTING OVERHEAD WIRES
- EXISTING BELL LINE
- EXISTING HYDRO
- EXISTING STREETLIGHT POWER SUPPLY
- EXISTING STREETLIGHT
- EXISTING PARKING LOT SIGNAGE

TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS

NOTE:  
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2	REVISED PER CITY COMMENTS	APRIL 24/20	CJR
1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR



DESIGN	MJH
CHECKED	CJR
DRAWN	MJH
CHECKED	CJR
APPROVED	JLS

FOR REVIEW ONLY



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LOCATION  
4837 ALBION ROAD, CITY OF OTTAWA  
HARD ROCK OTTAWA

DRAWING NAME  
**GENERAL PLAN OF SERVICES OVERALL DEVELOPMENT**

PROJECT NO.	116111
REV.	REV # 5
DRAWING NO.	116111-GP

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DOT-12-19-0191

LEGEND	
	PROPERTY LINE
	PROPOSED CURB
	PROPOSED DEPRESSED CURB
	PROPOSED RETAINING WALL
	PROPOSED PRECAST CONCRETE CURB (C.P. S.D. 803.020)
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	PROPOSED CAP
	PROPOSED CROSSWALK PAINTING
	PROPOSED PARKING PAINTING
	PROPOSED SANITARY SERVICE C/W MANHOLE
	PROPOSED STORM SEWER AND MANHOLE
	PROPOSED BUILDING ENTRANCE
	DIRECTION OF FLOW
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED INLET CONTROL DEVICE
	PROPOSED CATCHBASIN
	PROPOSED UNDERGROUND STORAGE WITH GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
	PROPOSED UNDERGROUND STORAGE WITHOUT GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
	PROPOSED LIGHT POST FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	LIGHTING BOLLARD (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	CONCRETE BOLLARDS
	HYDRO TRANSFORMER (REFER TO ELECTRICAL PLAN)
	GENERATOR (REFER TO ELECTRICAL PLAN)
	ELECTRICAL MANHOLE (REFER TO ELECTRICAL PLAN)
	EXISTING UTILITY POLE C/W GUT WIRES
	EXISTING WATERMAIN C/W VALVE & VALVE CHAMBER
	EXISTING HYDRANT C/W VALVE & LEAD
	EXISTING SANITARY MANHOLE & SEWER
	EXISTING SANITARY FORCEMAIN
	EXISTING STORM MANHOLE & SEWER
	EXISTING CATCHBASIN
	EXISTING INFILTRATION CHAMBERS
	EXISTING GAS MAIN
	EXISTING OVERHEAD WIRES
	EXISTING BELL LINE
	EXISTING HYDRO
	EXISTING STREETLIGHT POWER SUPPLY
	EXISTING STREETLIGHT
	EXISTING PARKING LOT SIGNAGE

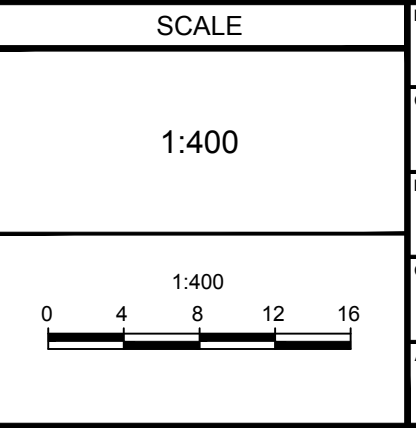
FUTURE EARL ARMSTRONG EXTENSION

ALBION RD.

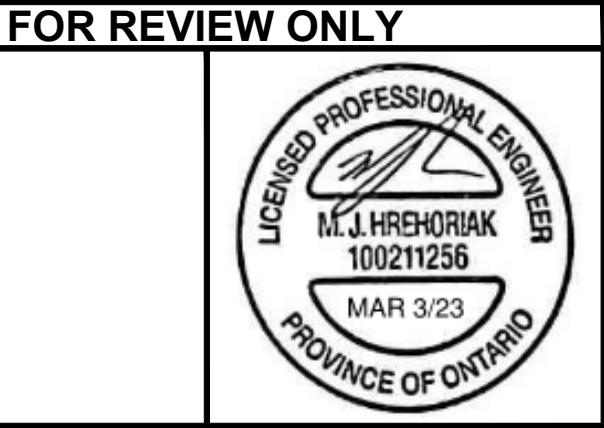
**NOT FOR CONSTRUCTION**

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NO.	REVISION	DATE	BY
5	REVISED PER CITY COMMENTS	MAR 03/23	MJH
4	DESIGN DOCUMENTS PACKAGE	NOV 15/22	MJH
3	REVISED PER CITY COMMENTS	NOV 08/22	MJH
2	REVISED PER CITY COMMENTS	APRIL 24/20	CJR
1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR



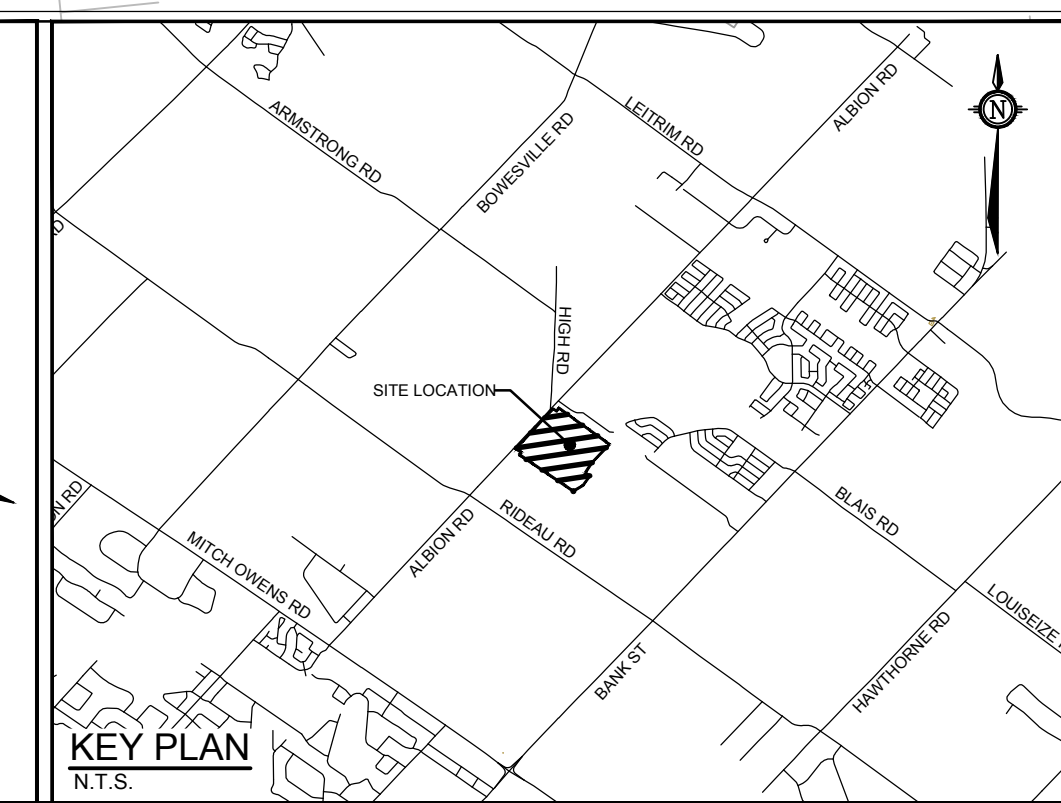
FOR REVIEW ONLY	PREPARED	CHECKED	DRAWN	CHECKED	APPROVED
	MJH	CJR	MJH	CJR	JLS



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Facsimile: (613) 254-5867  
Website: www.novatech-eng.com

LOCATION	
4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA	
DRAWING NAME	
GENERAL PLAN OF SERVICES SOUTH-WEST DEVELOPMENT	
PROJECT NO.	116111
REV	REV # 5
DRAWING NO.	116111-GP1

TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS

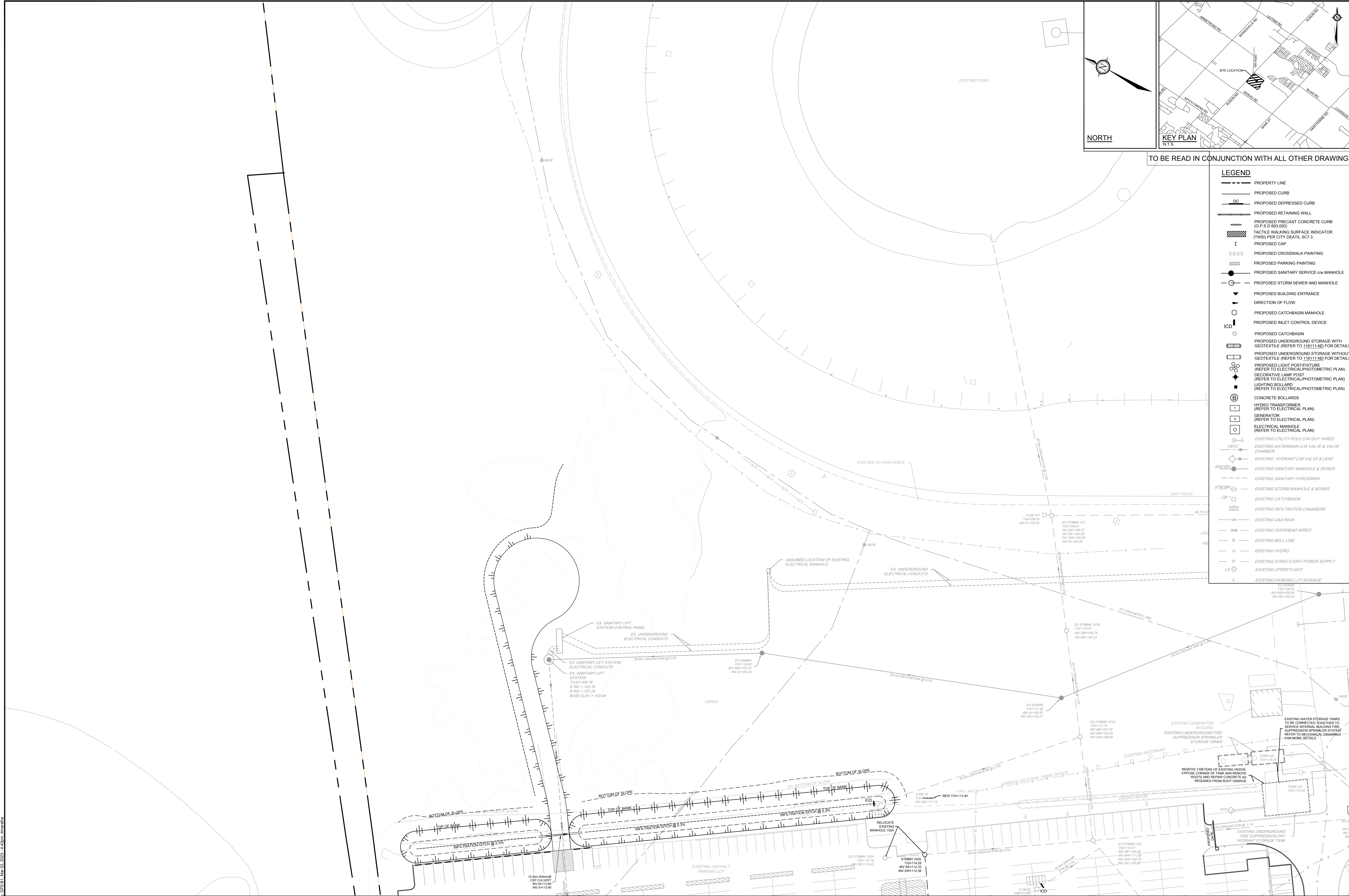


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D07-12-19-0191

TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS

LEGEND	
	PROPERTY LINE
	PROPOSED CURB
	PROPOSED DEPRESSED CURB
	PROPOSED RETAINING WALL
	PROPOSED PRECAST CONCRETE CURB (O.P.S.D 603.020)
	TACTILE WALKING SURFACE INDICATOR (TWS) PER CITY DETAIL SC7.3
	PROPOSED CAP
	PROPOSED CROSSWALK PAINTING
	PROPOSED PARKING PAINTING
	PROPOSED SANITARY SERVICE c/w MANHOLE
	PROPOSED STORM SEWER AND MANHOLE
	PROPOSED BUILDING ENTRANCE
	DIRECTION OF FLOW
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED INLET CONTROL DEVICE
	PROPOSED CATCHBASIN
	PROPOSED UNDERGROUND STORAGE WITH GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
	PROPOSED UNDERGROUND STORAGE WITHOUT GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
	PROPOSED LIGHT POST/FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	LIGHTING BOLLARD (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	CONCRETE BOLLARDS
	HYDRO TRANSFORMER (REFER TO ELECTRICAL PLAN)
	GENERATOR (REFER TO ELECTRICAL PLAN)
	ELECTRICAL MANHOLE (REFER TO ELECTRICAL PLAN)
	EXISTING UTILITY POLE c/w GUY WIRES
	EXISTING WATERMAIN c/w VALVE & VALVE CHAMBER
	EXISTING HYDRANT c/w VALVE & LEAD
	EXISTING SANITARY MANHOLE & SEWER
	EXISTING SANITARY FORCEMAIN
	EXISTING STORM MANHOLE & SEWER
	EXISTING CATCHBASIN
	EXISTING INFILTRATION CHAMBERS
	EXISTING GAS MAIN
	EXISTING OVERHEAD WIRES
	EXISTING BELL LINE
	EXISTING HYDRO
	EXISTING STREETLIGHT POWER SUPPLY
	EXISTING STREETLIGHT
	EXISTING PARKING LOT SIGNAGE



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1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR

SCALE

1:400

FOR REVIEW ONLY	
DESIGN	MJH
CHECKED	CJR
DRAWN	MJH
CHECKED	CJR
APPROVED	JLS

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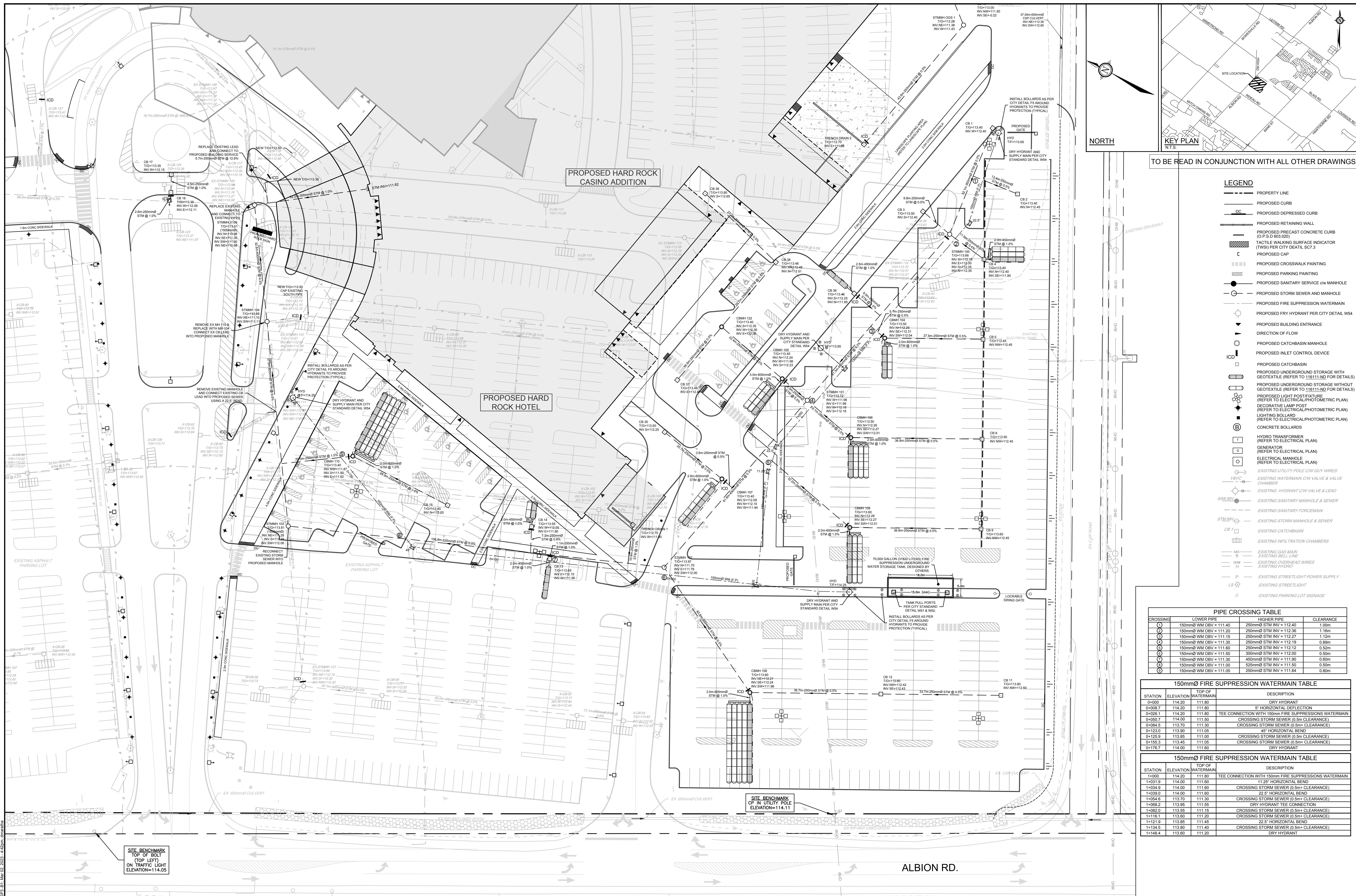
LOCATION  
 4837 ALBION ROAD, CITY OF OTTAWA  
 HARD ROCK OTTAWA

DRAWING NAME  
 GENERAL PLAN OF SERVICES  
 NORTH-WEST DEVELOPMENT

PROJECT NO.: 116111  
 REV # 5  
 DRAWING NO.: 116111-GP2

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D07-12-19-0191



TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS

- LEGEND**
- PROPERTY LINE
  - - - PROPOSED CURB
  - - - PROPOSED DEPRESSED CURB
  - PROPOSED RETAINING WALL
  - PROPOSED PRECAST CONCRETE CURB (O.P.S.D 603.020)
  - TACTILE WALKING SURFACE INDICATOR (TWS) PER CITY DETAIL SCT-3
  - PROPOSED CAP
  - PROPOSED CATCHBASIN PAINTING
  - PROPOSED PARKING PAINTING
  - PROPOSED SANITARY SERVICE c/w MANHOLE
  - PROPOSED STORM SEWER AND MANHOLE
  - PROPOSED FIRE SUPPRESSION WATERMAIN
  - PROPOSED FRY HYDRANT PER CITY DETAIL W54
  - PROPOSED BUILDING ENTRANCE
  - DIRECTION OF FLOW
  - PROPOSED CATCHBASIN MANHOLE
  - PROPOSED INLET CONTROL DEVICE
  - PROPOSED CATCHBASIN
  - PROPOSED UNDERGROUND STORAGE WITH GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
  - PROPOSED UNDERGROUND STORAGE WITHOUT GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
  - PROPOSED LIGHT POST FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
  - DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
  - LIGHTING BOLLARD (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
  - CONCRETE BOLLARDS
  - HYDRO TRANSFORMER (REFER TO ELECTRICAL PLAN)
  - GENERATOR (REFER TO ELECTRICAL PLAN)
  - ELECTRICAL MANHOLE (REFER TO ELECTRICAL PLAN)
  - EXISTING UTILITY POLE c/w GUY WIRES
  - EXISTING WATERMAIN c/w VALVE & VALVE CHAMBER
  - EXISTING HYDRANT c/w VALVE & LEAD
  - EXISTING SANITARY MANHOLE & SEWER
  - EXISTING SANITARY FORCEMAIN
  - EXISTING STORM MANHOLE & SEWER
  - EXISTING INFILTRATION CHAMBERS
  - EXISTING GAS MAIN
  - EXISTING BELL LINE
  - EXISTING OVERHEAD WIRES
  - EXISTING HYDRO
  - EXISTING STREETLIGHT POWER SUPPLY
  - EXISTING STREETLIGHT
  - EXISTING PARKING LOT SIGNAGE

**PIPE CROSSING TABLE**

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE
1	150mm VM OBV = 111.40	250mm STM INV = 112.40	1.00m
2	150mm VM OBV = 111.20	250mm STM INV = 112.36	1.16m
3	150mm VM OBV = 111.15	250mm STM INV = 112.27	1.12m
4	150mm VM OBV = 111.30	250mm STM INV = 112.19	0.89m
5	150mm VM OBV = 111.60	250mm STM INV = 112.12	0.52m
6	150mm VM OBV = 111.50	300mm STM INV = 112.00	0.50m
7	150mm VM OBV = 111.30	450mm STM INV = 111.90	0.60m
8	150mm VM OBV = 111.00	525mm STM INV = 111.50	0.50m
9	150mm VM OBV = 111.05	250mm STM INV = 111.84	0.80m

**150mm FIRE SUPPRESSION WATERMAIN TABLE**

STATION	ELEVATION	TOP OF WATERMAIN	DESCRIPTION
0+000	114.20	111.80	DRY HYDRANT
0+008.7	114.20	111.80	5" HORIZONTAL DEFLECTION
0+026.1	114.20	111.80	TEE CONNECTION WITH 150mm FIRE SUPPRESSIONS WATERMAIN
0+050.7	114.00	111.50	CROSSING STORM SEWER (0.5m CLEARANCE)
0+084.5	113.70	111.30	CROSSING STORM SEWER (0.5m CLEARANCE)
0+123.0	113.90	111.05	45" HORIZONTAL BEND
0+125.9	113.85	111.00	CROSSING STORM SEWER (0.5m CLEARANCE)
0+155.3	113.45	111.05	CROSSING STORM SEWER (0.5m CLEARANCE)
0+176.7	114.00	111.60	DRY HYDRANT

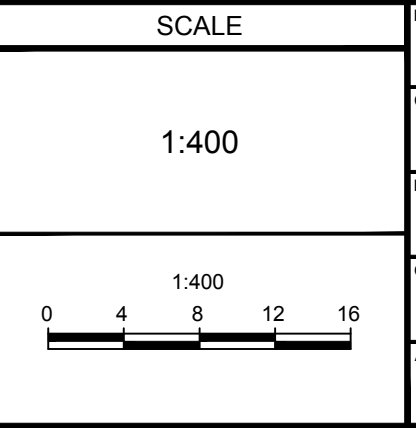
**150mm FIRE SUPPRESSION WATERMAIN TABLE**

STATION	ELEVATION	TOP OF WATERMAIN	DESCRIPTION
1+000	114.20	111.80	DRY HYDRANT
1+031.9	114.00	111.50	TEE CONNECTION WITH 150mm FIRE SUPPRESSIONS WATERMAIN
1+034.9	114.00	111.60	11.25" HORIZONTAL BEND
1+039.0	114.00	111.60	CROSSING STORM SEWER (0.5m CLEARANCE)
1+054.6	113.70	111.30	22.5" HORIZONTAL BEND
1+068.2	113.95	111.55	CROSSING STORM SEWER (0.5m CLEARANCE)
1+082.0	113.55	111.15	DRY HYDRANT TEE CONNECTION
1+116.1	113.60	111.20	CROSSING STORM SEWER (0.5m CLEARANCE)
1+121.9	113.85	111.45	22.5" HORIZONTAL BEND
1+134.5	113.85	111.40	CROSSING STORM SEWER (0.5m CLEARANCE)
1+148.4	113.80	111.20	DRY HYDRANT

SITE BENCHMARK  
TOP OF BOLT  
(TOP LEFT)  
ON TRAFFIC LIGHT  
ELEVATION=114.05

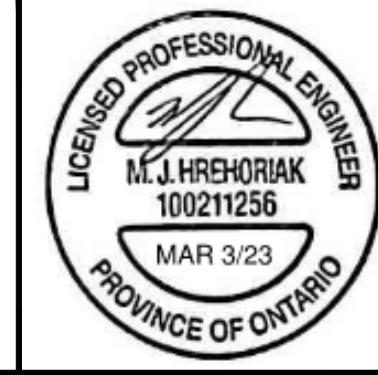
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1	ISSUED FOR SITE PLAN APPROVAL	NOV 2019	CJR



DESIGN	DATE	BY
CHECKED		MJH
DRAWN		CJR
CHECKED		MJH
APPROVED		CJR
		JLS

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LOCATION  
4837 ALBION ROAD, CITY OF OTTAWA  
HARD ROCK OTTAWA

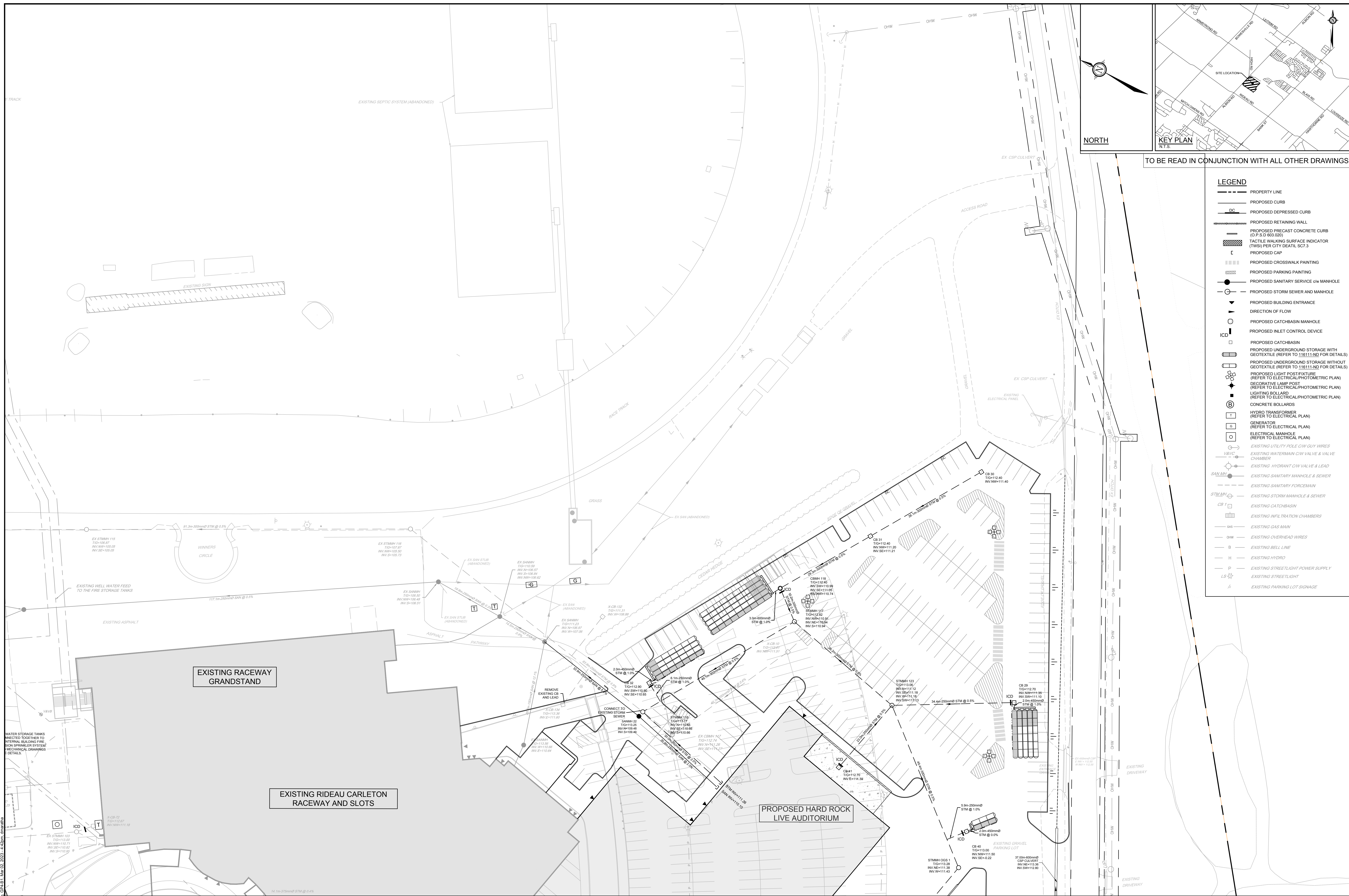
DRAWING NAME  
GENERAL PLAN OF SERVICES  
SOUTH-EAST DEVELOPMENT

PROJECT NO.: 116111  
REV #5  
DRAWING NO.: 116111-GP3

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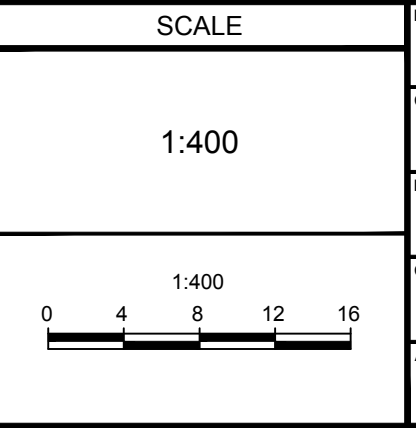
**LEGEND**

- PROPERTY LINE
- PROPOSED CURB
- DC --- PROPOSED DEPRESSED CURB
- PROPOSED RETAINING WALL
- PROPOSED PRECAST CONCRETE CURB (O.P.S.D 603.020)
- TACTILE WALKING SURFACE INDICATOR (TWS) PER CITY DETAIL SCT.3
- PROPOSED CAP
- PROPOSED CROSSWALK PAINTING
- PROPOSED PARKING PAINTING
- PROPOSED SANITARY SERVICE c/w MANHOLE
- PROPOSED STORM SEWER AND MANHOLE
- PROPOSED BUILDING ENTRANCE
- DIRECTION OF FLOW
- PROPOSED CATCHBASIN MANHOLE
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- PROPOSED CATCHBASIN
- PROPOSED UNDERGROUND STORAGE WITH GEOTEXTILE (REFER TO 116111-ND FOR DETAILS)
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- PROPOSED LIGHT POST/FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
- DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
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- CONCRETE BOLLARDS
- HYDRO TRANSFORMER (REFER TO ELECTRICAL PLAN)
- GENERATOR (REFER TO ELECTRICAL PLAN)
- ELECTRICAL MANHOLE (REFER TO ELECTRICAL PLAN)
- EXISTING UTILITY POLE c/w GUY WIRES
- EXISTING WATERMAIN c/w VALVE & VALVE CHAMBER
- EXISTING HYDRANT c/w VALVE & LEAD
- EXISTING SANITARY MANHOLE & SEWER
- EXISTING SANITARY FORCEMAIN
- EXISTING STORM MANHOLE & SEWER
- EXISTING CATCHBASIN
- EXISTING INFILTRATION CHAMBERS
- EXISTING GAS MAIN
- EXISTING OVERHEAD WIRES
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PREPARED	FOR REVIEW ONLY
CHECKED: MJH	
DRAWN: CJR	
CHECKED: MJH	
APPROVED: CJR	
JLS	



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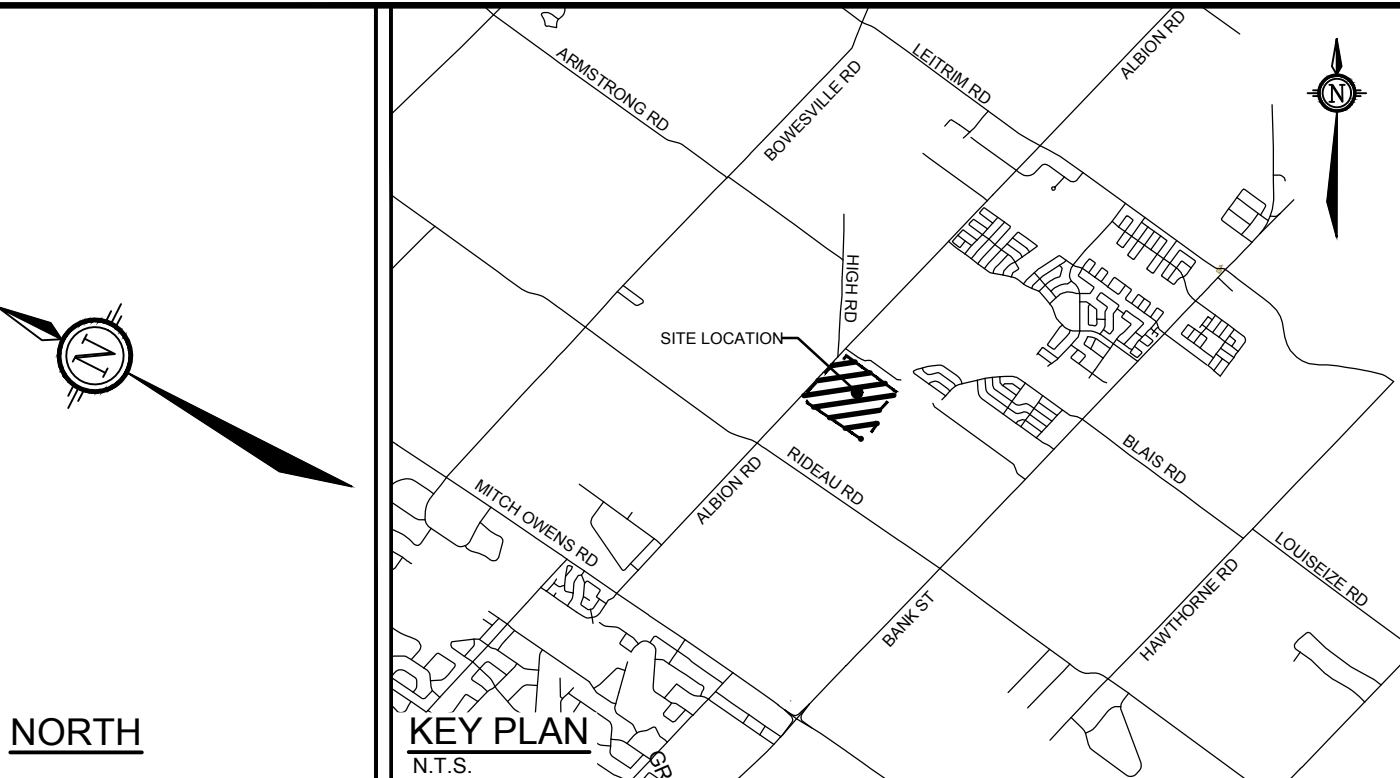
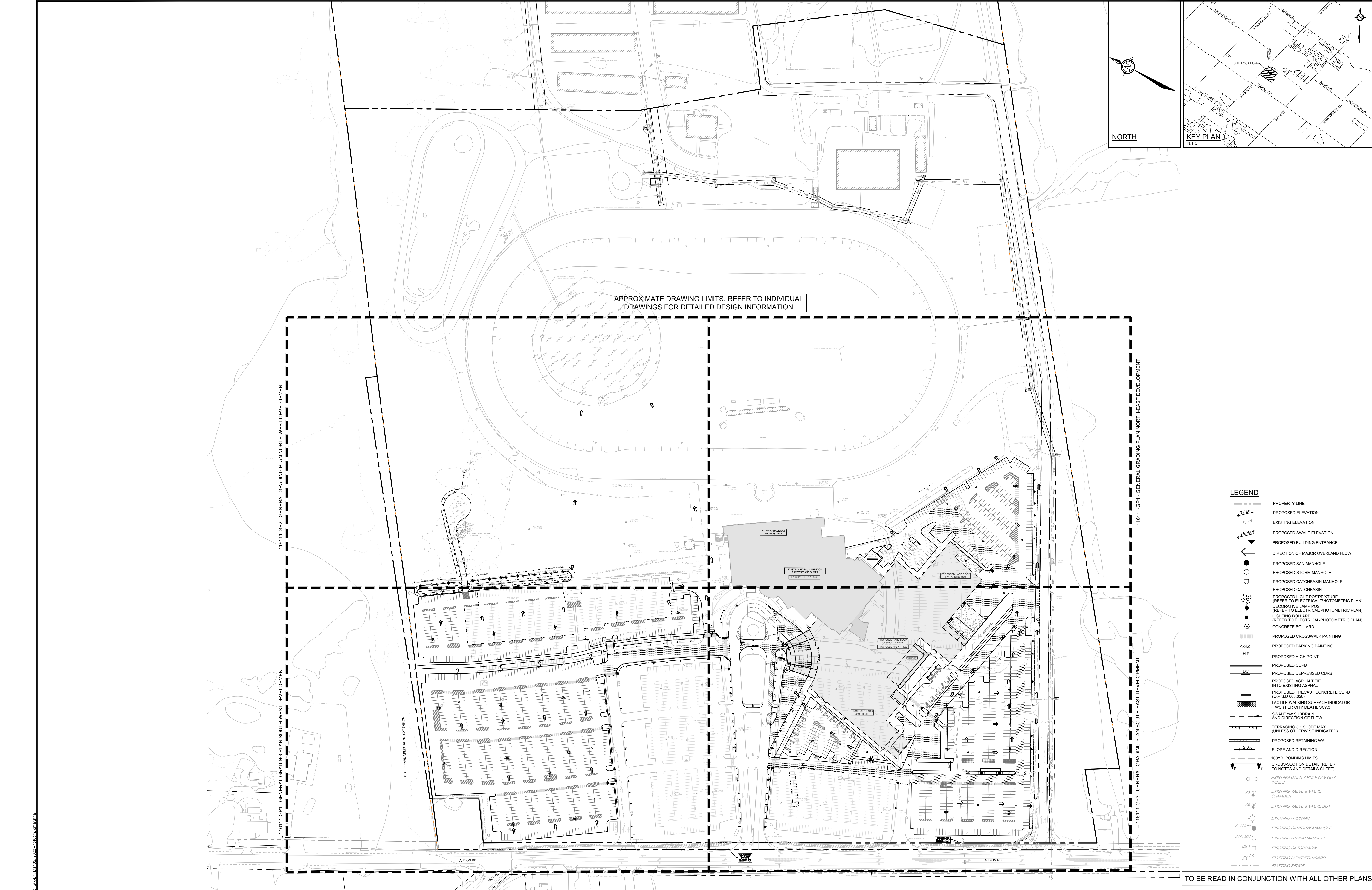
LOCATION  
 4837 ALBION ROAD, CITY OF OTTAWA  
 HARD ROCK OTTAWA

DRAWING NAME  
**GENERAL PLAN OF SERVICES  
 NORTH-EAST DEVELOPMENT**

PROJECT NO.: 116111  
 REV: REV # 5  
 DRAWING NO.: 116111-GP4

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D07-12-19-0191



**LEGEND**

	PROPERTY LINE
	PROPOSED ELEVATION
	EXISTING ELEVATION
	PROPOSED SWALE ELEVATION
	PROPOSED BUILDING ENTRANCE
	DIRECTION OF MAJOR OVERLAND FLOW
	PROPOSED SAN MANHOLE
	PROPOSED STORM MANHOLE
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED LIGHT POST/FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
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	CONCRETE BOLLARD
	PROPOSED CROSSWALK PAINTING
	PROPOSED PARKING PAINTING
	PROPOSED HIGH POINT
	PROPOSED CURB
	PROPOSED DEPRESSED CURB
	PROPOSED ASPHALT TIE INTO EXISTING ASPHALT
	PROPOSED PRECAST CONCRETE CURB (0.15 x 400 x 20)
	TACTILE WALKING SURFACE INDICATOR (TWSI) PER CITY DETAIL SCT.3
	SWALE WITH SUBDRAIN AND DIRECTION OF FLOW
	TERRACING 3:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
	PROPOSED RETAINING WALL
	SLOPE AND DIRECTION
	100% PONDING LIMITS
	CROSS-SECTION DETAIL (REFER TO NOTES AND DETAILS SHEET)
	EXISTING UTILITY POLE C/W GUY WIRES
	EXISTING VALVE & VALVE CHAMBER
	EXISTING VALVE & VALVE BOX
	EXISTING HYDRANT
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING CATCHBASIN
	EXISTING LIGHT STANDARD
	EXISTING FENCE

TO BE READ IN CONJUNCTION WITH ALL OTHER PLANS

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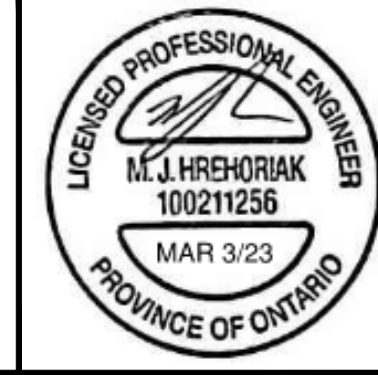
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SCALE	
1:1250	0 10 20 30 40 50

DESIGN	MJH
CHECKED	CJR
DRAWN	MJH
CHECKED	CJR
APPROVED	JLS

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LOCATION  
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HARD ROCK OTTAWA

DRAWING NAME  
**GRADING PLAN  
OVERALL DEVELOPMENT**

PROJECT No.	116111
REV #	5
DRAWING No.	116111-GR

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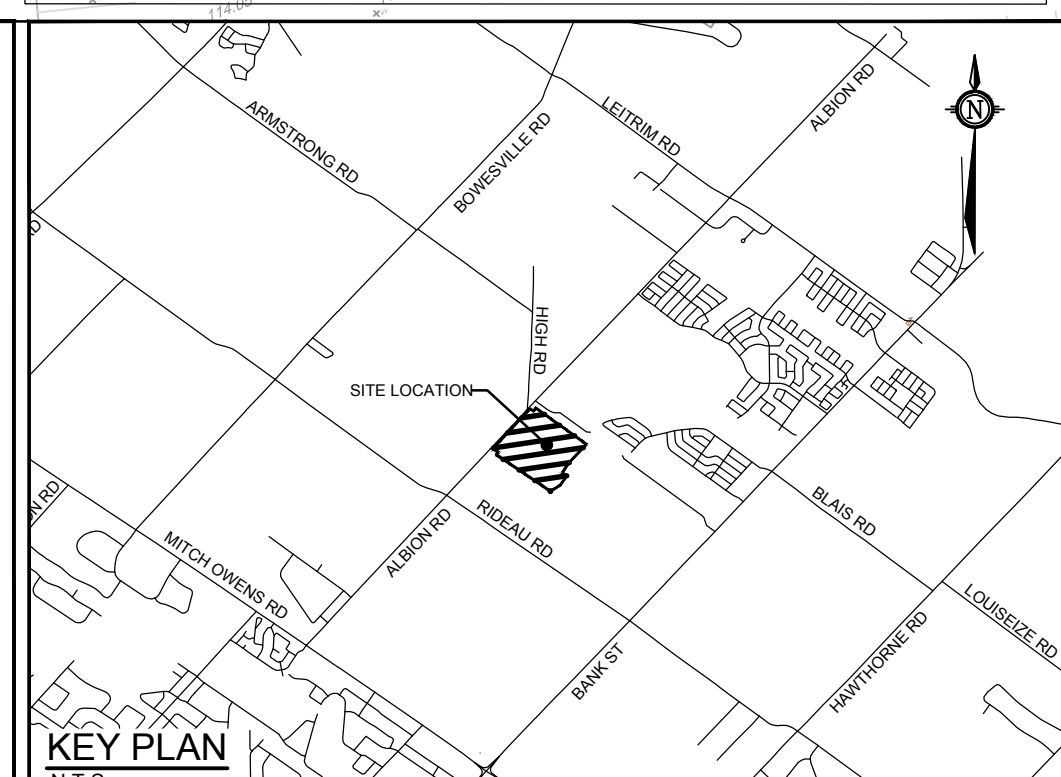
PL487-2012 03/09/2023

LEGEND	
	PROPERTY LINE
	EXISTING ELEVATION
	PROPOSED SWALE ELEVATION
	PROPOSED BUILDING ENTRANCE
	DIRECTION OF MAJOR OVERLAND FLOW
	PROPOSED SAN MANHOLE
	PROPOSED STORM MANHOLE
	PROPOSED CATCHBASIN MANHOLE
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	PROPOSED HIGH POINT
	PROPOSED CURB
	PROPOSED DEPRESSED CURB
	PROPOSED ASPHALT INTO EXISTING ASPHALT
	PROPOSED PRECAST CONCRETE CURB (O.P.S.D. 603.020)
	TACTILE WALKING SURFACE INDICATOR (TWSI) PER CITY DETAIL SC7.3
	SWALE WITH SUBDRAIN AND DIRECTION OF FLOW
	TERRACING 3:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
	PROPOSED RETAINING WALL
	SLOPE AND DIRECTION
	100YR PONDING LIMITS
	CROSS-SECTION DETAIL (REFER TO NOTES AND DETAILS SHEET)
	EXISTING UTILITY POLE OR GUY WIRES
	EXISTING VALVE & VALVE CHAMBER
	EXISTING VALVE & VALVE BOX
	EXISTING HYDRANT
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING CATCHBASIN
	EXISTING LIGHT STANDARD
	EXISTING FENCE

FUTURE EARL ARMSTRONG EXTENSION

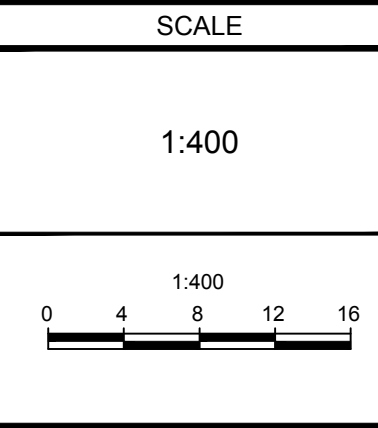
ALBION RD.

TO BE READ IN CONJUNCTION WITH ALL OTHER PLANS

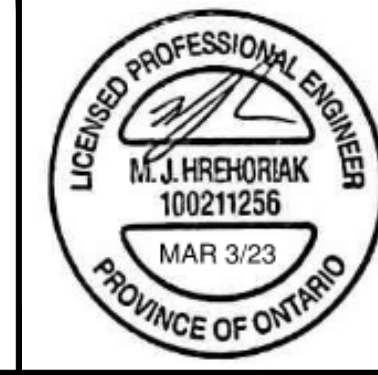


**NOT FOR CONSTRUCTION**

NO.	REVISION	DATE	BY
5	REVISED PER CITY COMMENTS	MAR 03/23	MJH
4	DESIGN DOCUMENTS PACKAGE	NOV 15/22	MJH
3	REVISED PER CITY COMMENTS	NOV 08/22	MJH
2	REVISED PER CITY COMMENTS	APRIL 24/20	CJR
1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR



FOR REVIEW ONLY	
CHECKED	MJH
DRAWN	CJR
CHECKED	MJH
APPROVED	CJR
APPROVED	JLS



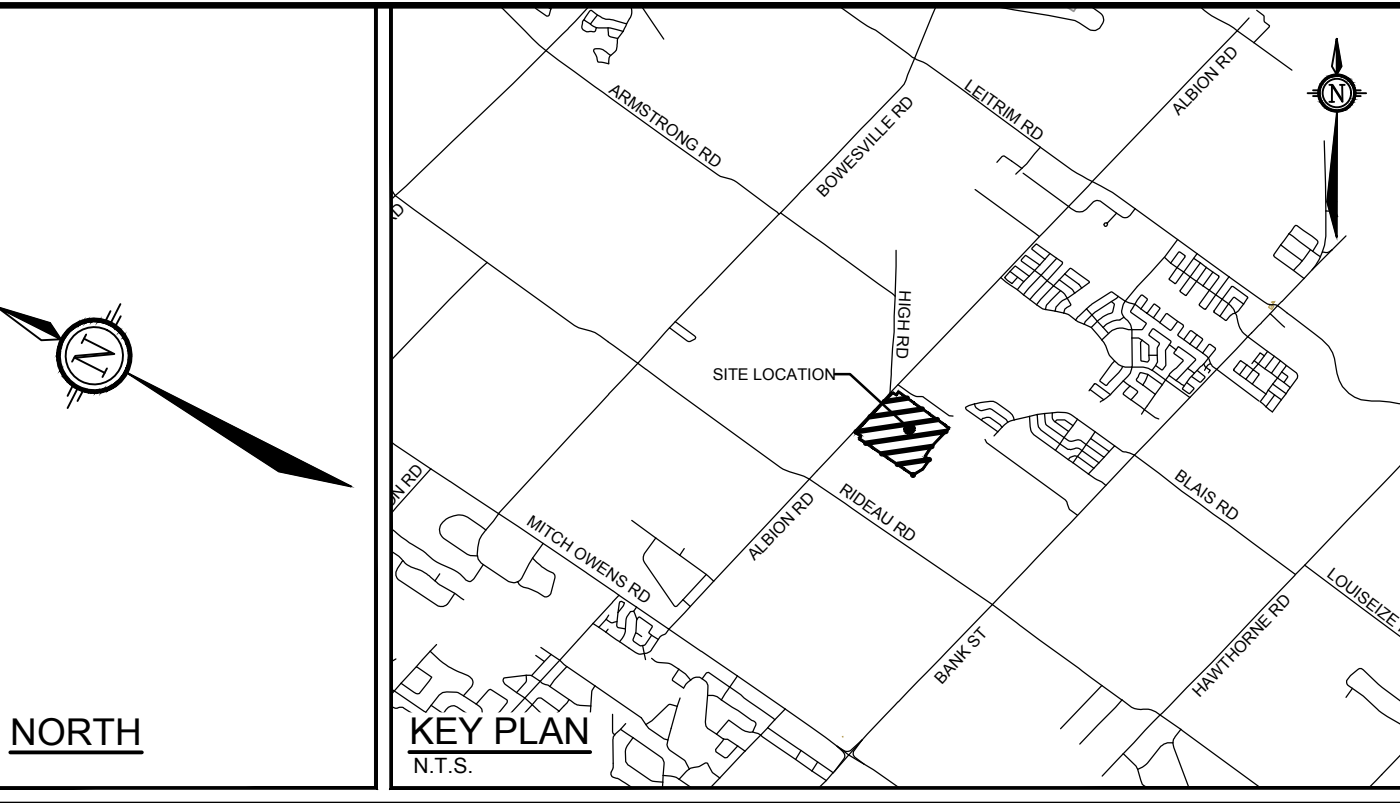
**NOVATECH**  
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 Ottawa, Ontario, Canada K2M 1P6  
 Telephone: (613) 254-9643  
 Facsimile: (613) 254-5867  
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LOCATION 4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA	PROJECT NO. 116111
DRAWING NAME GRADING PLAN SOUTH-WEST DEVELOPMENT	REV # 5
	DRAWING NO. 116111-GR1

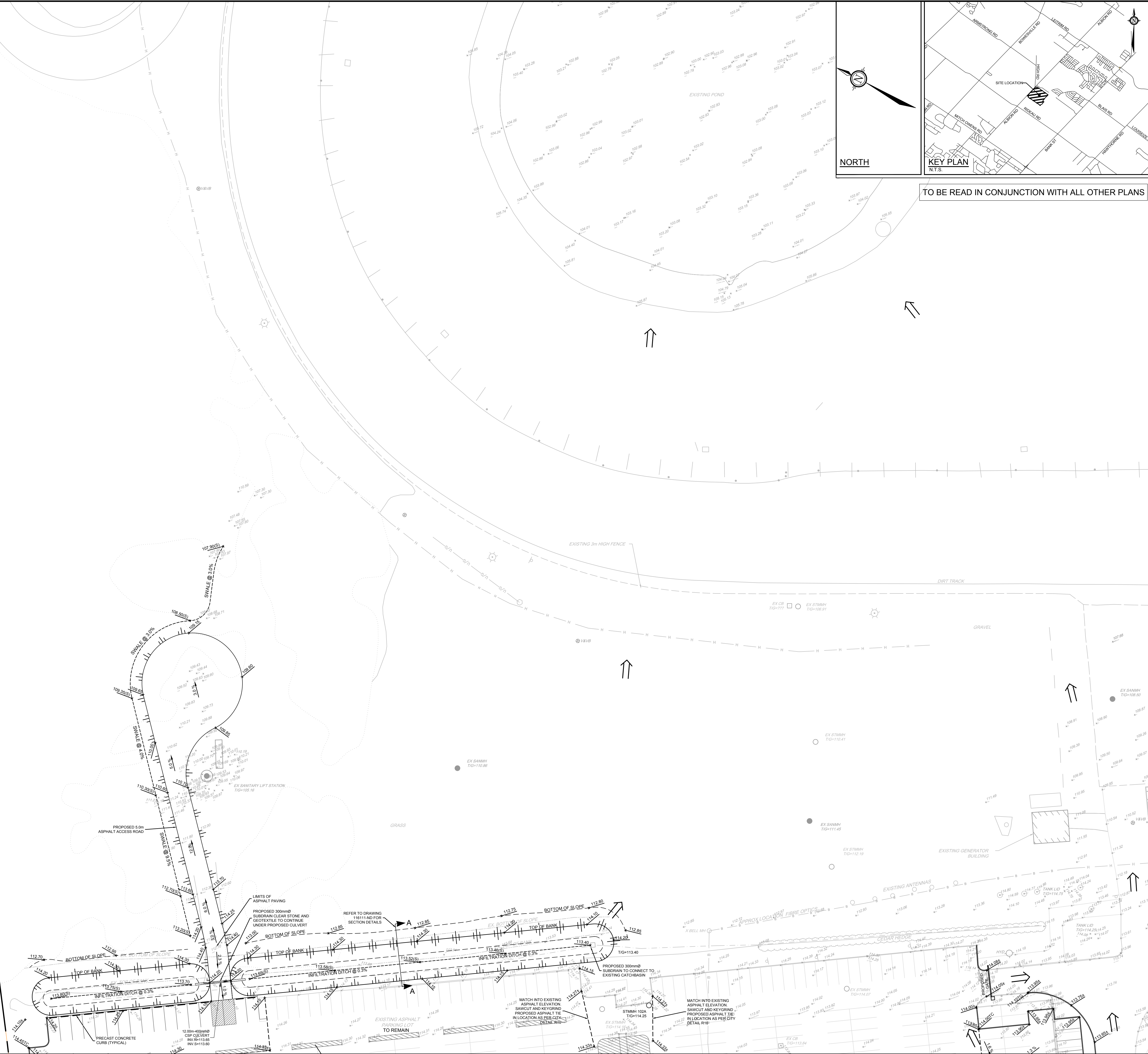
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D07-12-19-0191

LEGEND	
	PROPERTY LINE
	PROPOSED ELEVATION
	EXISTING ELEVATION
	PROPOSED SWALE ELEVATION
	PROPOSED BUILDING ENTRANCE
	DIRECTION OF MAJOR OVERLAND FLOW
	PROPOSED SAN MANHOLE
	PROPOSED STORM MANHOLE
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED LIGHT FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	LIGHTING BOLLARD (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	CONCRETE BOLLARD
	PROPOSED CROSSWALK PAINTING
	PROPOSED PARKING PAINTING
	PROPOSED HIGH POINT
	PROPOSED CURB
	PROPOSED DEPRESSED CURB
	PROPOSED ASPHALT TIE INTO EXISTING ASPHALT
	PROPOSED PRECAST CONCRETE CURB (O.P.S.D. 603.020)
	TACTILE WALKING SURFACE INDICATOR (TWSI) PER CITY DETAIL SCT.3
	SWALE @w SUBDRAIN AND DIRECTION OF FLOW
	TERRACING 3:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
	PROPOSED RETAINING WALL
	SLOPE AND DIRECTION
	100YR. PONDING LIMITS
	CROSS-SECTION DETAIL (REFER TO NOTES AND DETAILS SHEET)
	EXISTING UTILITY POLE OR GUY WIRES
	EXISTING VALVE & VALVE CHAMBER
	EXISTING VALVE & VALVE BOX
	EXISTING HYDRANT
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING CATCHBASIN
	EXISTING LIGHT STANDARD
	EXISTING FENCE



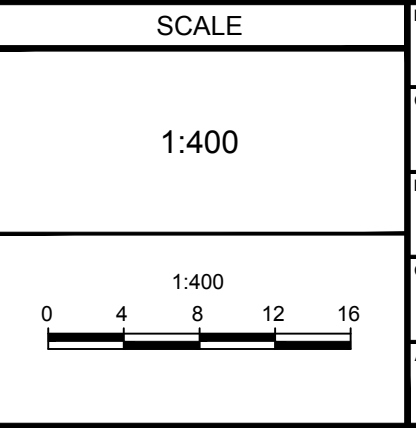
TO BE READ IN CONJUNCTION WITH ALL OTHER PLANS



**NOT FOR CONSTRUCTION**

NOTE:  
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NO.	REVISION	DATE	BY
5	REVISED PER CITY COMMENTS	MAR 03/23	MJH
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2	REVISED PER CITY COMMENTS	APRIL 24/20	CJR
1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR



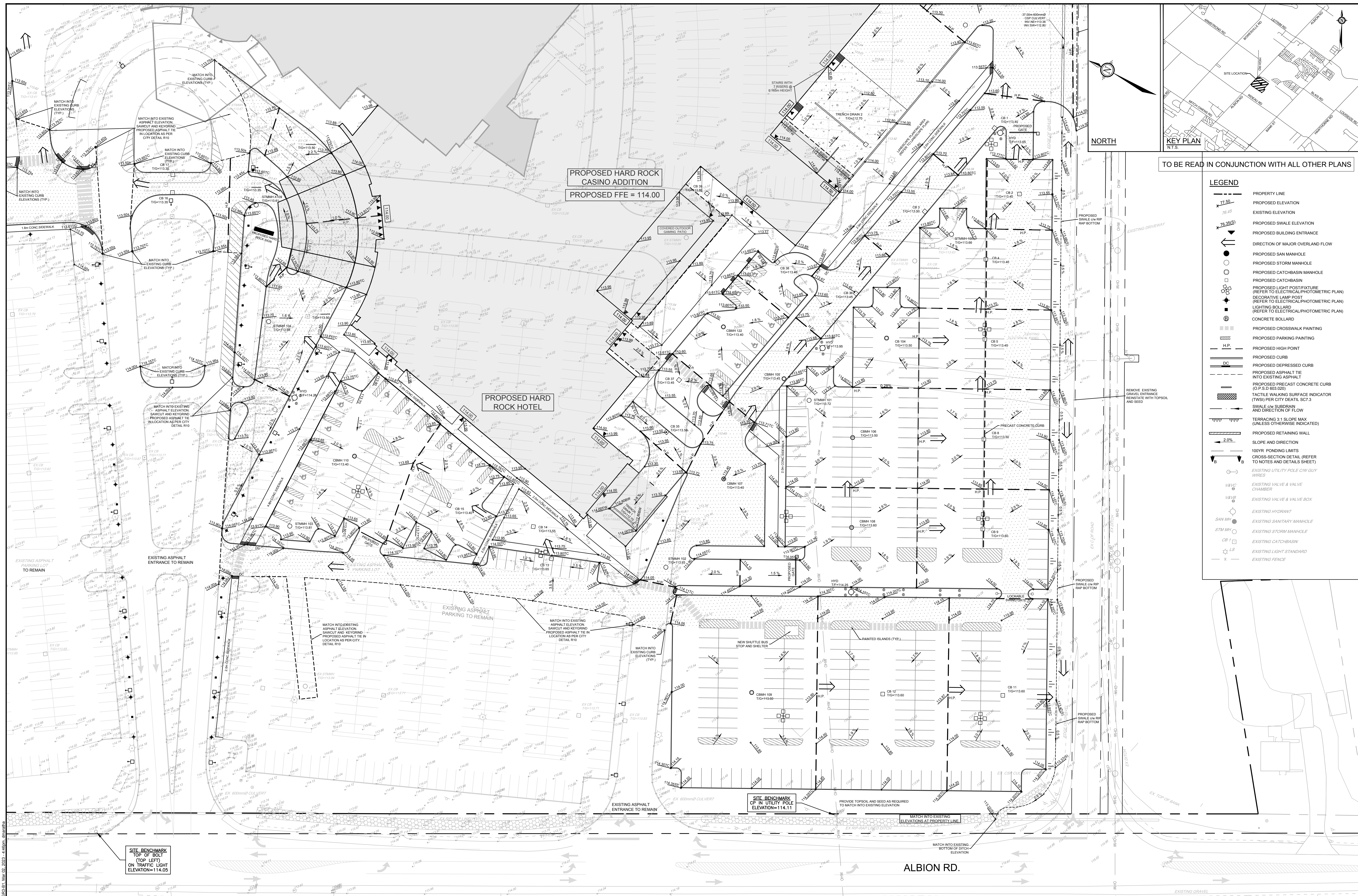
FOR REVIEW ONLY	
CHECKED	MJH
DRAWN	CJR
CHECKED	MJH
APPROVED	CJR
APPROVED	JLS



LOCATION 4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA	PROJECT NO. 116111
DRAWING NAME GRADING PLAN NORTH-WEST DEVELOPMENT	REV # 5
	DRAWING NO. 116111-GR2

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D07-12-19-0191



TO BE READ IN CONJUNCTION WITH ALL OTHER PLANS

**LEGEND**

---	PROPERTY LINE
71.50	PROPOSED ELEVATION
76.45	EXISTING ELEVATION
78.35(S)	PROPOSED SWALE ELEVATION
→	PROPOSED BUILDING ENTRANCE
→	DIRECTION OF MAJOR OVERLAND FLOW
○	PROPOSED SAN MANHOLE
○	PROPOSED STORM MANHOLE
○	PROPOSED CATCHBASIN MANHOLE
○	PROPOSED CATCHBASIN
○	PROPOSED LIGHT POST/STRUCTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
○	DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
○	LIGHTING BOLLARD (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
○	CONCRETE BOLLARD
---	PROPOSED CROSSWALK PAINTING
---	PROPOSED PARKING PAINTING
H.P.	PROPOSED HIGH POINT
DC	PROPOSED CURB
---	PROPOSED DEPRESSED CURB
---	PROPOSED ASPHALT INTO EXISTING ASPHALT
---	PROPOSED PRECAST CONCRETE CURB (P.S.D 803.020)
---	TACTILE WALKING SURFACE INDICATOR (TWIS) PER CITY DETAIL SCT.3
---	SWALE C/W SUBDRAIN AND DIRECTION OF FLOW
---	TERRACING 3:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
---	PROPOSED RETAINING WALL
---	SLOPE AND DIRECTION
---	100YR. PONDING LIMITS
---	CROSS-SECTION DETAIL (REFER TO NOTES AND DETAILS SHEET)
---	EXISTING UTILITY POLE C/W GUY WIRES
---	EXISTING VALVE & VALVE CHAMBER
---	EXISTING VALVE & VALVE BOX
---	EXISTING HYDRANT
---	EXISTING SANITARY MANHOLE
---	EXISTING STORM MANHOLE
---	EXISTING CATCHBASIN
---	EXISTING LIGHT STANDARD
---	EXISTING FENCE

**NOT FOR CONSTRUCTION**

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1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR

SCALE	DESIGNER	CHECKER	DRAWN	CHECKED	APPROVED
1:400	MJH	CJR	MJH	CJR	JLS

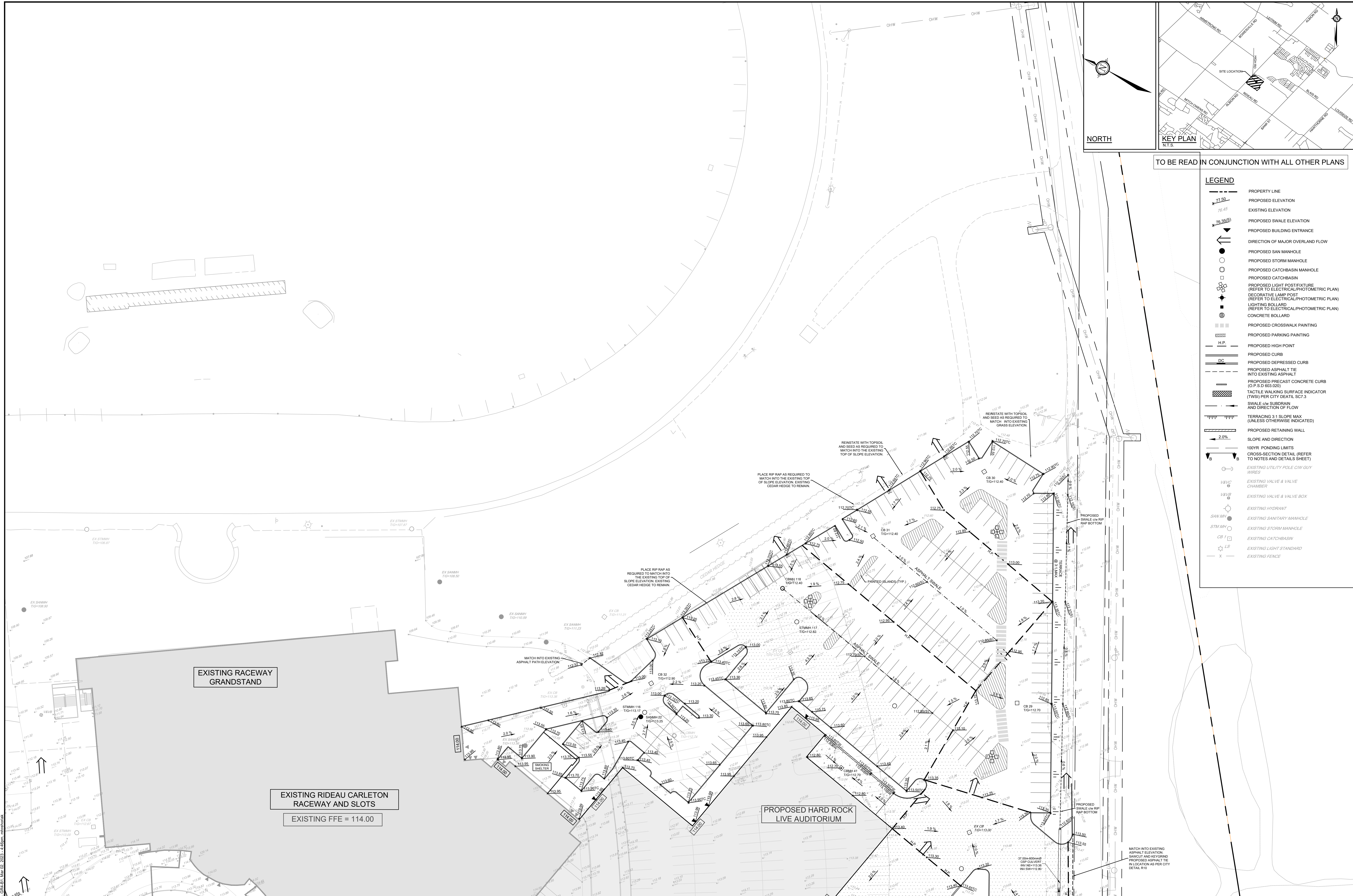
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**NOVATECH**  
Engineers, Planners & Landscape Architects  
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Ottawa, Ontario, Canada K2M 1P6  
Telephone: (613) 254-9643  
Facsimile: (613) 254-5867  
Website: www.novatech-eng.com

**PROFESSIONAL ENGINEER**  
M.C. HROCHIAK  
10021256  
MAR 3/23  
PROVINCE OF ONTARIO

LOCATION 4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA	PROJECT NO. 116111
DRAWING NAME GRADING PLAN SOUTH-EAST DEVELOPMENT	REV # 5
DRAWING NO. 116111-GR3	

D07-12-19-0191



TO BE READ IN CONJUNCTION WITH ALL OTHER PLANS

LEGEND	
	PROPERTY LINE
	PROPOSED ELEVATION
	EXISTING ELEVATION
	PROPOSED SWALE ELEVATION
	PROPOSED BUILDING ENTRANCE
	DIRECTION OF MAJOR OVERLAND FLOW
	PROPOSED SAN MANHOLE
	PROPOSED STORM MANHOLE
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED LIGHT POST/FIXTURE (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	DECORATIVE LAMP POST (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	LIGHTING BOLLARD (REFER TO ELECTRICAL/PHOTOMETRIC PLAN)
	CONCRETE BOLLARD
	PROPOSED CROSSWALK PAINTING
	PROPOSED PARKING PAINTING
	PROPOSED HIGH POINT
	PROPOSED CURB
	PROPOSED DEPRESSED CURB
	PROPOSED ASPHALT TIE INTO EXISTING ASPHALT
	PROPOSED PRECAST CONCRETE CURB (O.P.S.D. 603.020)
	TACTILE WALKING SURFACE INDICATOR (TWSI) PER CITY DETAIL SC7.3
	SWALE c/w SUBDRAIN AND DIRECTION OF FLOW
	TERRACING 3:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
	PROPOSED RETAINING WALL
	SLOPE AND DIRECTION
	100YR. PONDING LIMITS
	CROSS-SECTION DETAIL (REFER TO NOTES AND DETAILS SHEET)
	EXISTING UTILITY POLE c/w GUY WIRES
	EXISTING VALVE & VALVE CHAMBER
	EXISTING VALVE & VALVE BOX
	EXISTING HYDRANT
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING CATCHBASIN
	EXISTING LIGHT STANDARD
	EXISTING FENCE

EXISTING RACEWAY GRANDSTAND

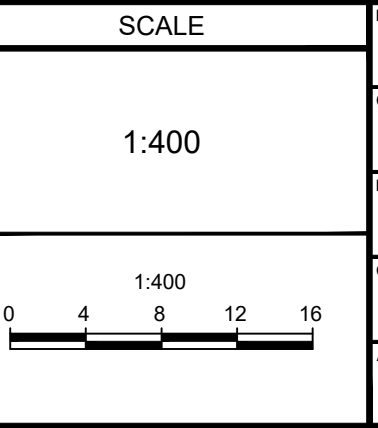
EXISTING RIDEAU CARLETON RACEWAY AND SLOTS  
EXISTING FFE = 114.00

PROPOSED HARD ROCK LIVE AUDITORIUM

NOTE:  
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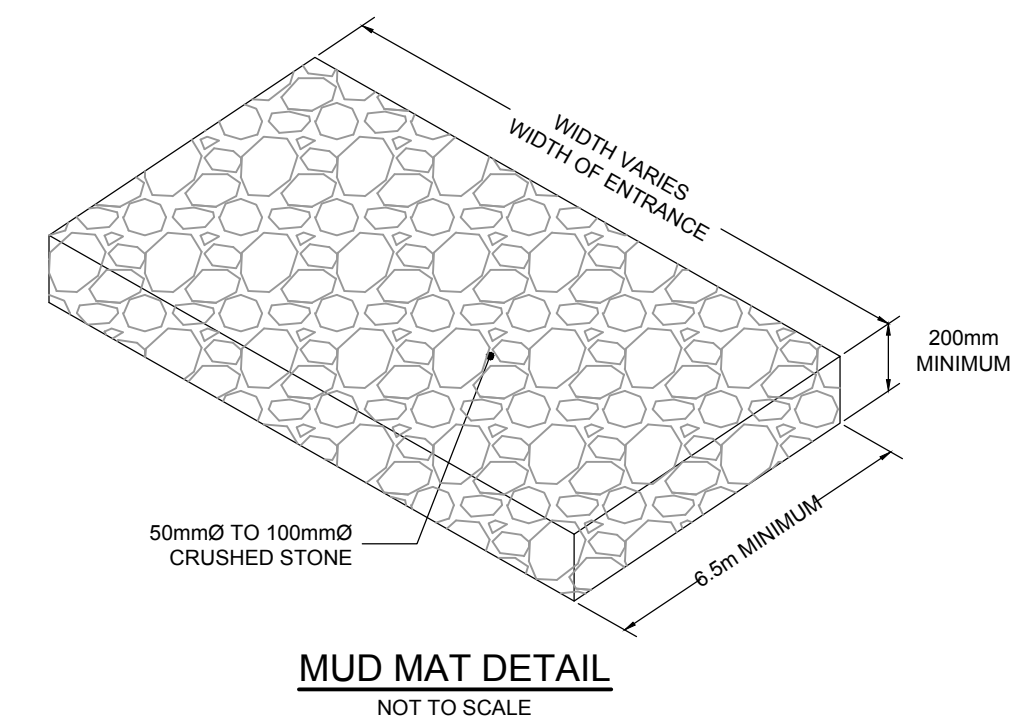
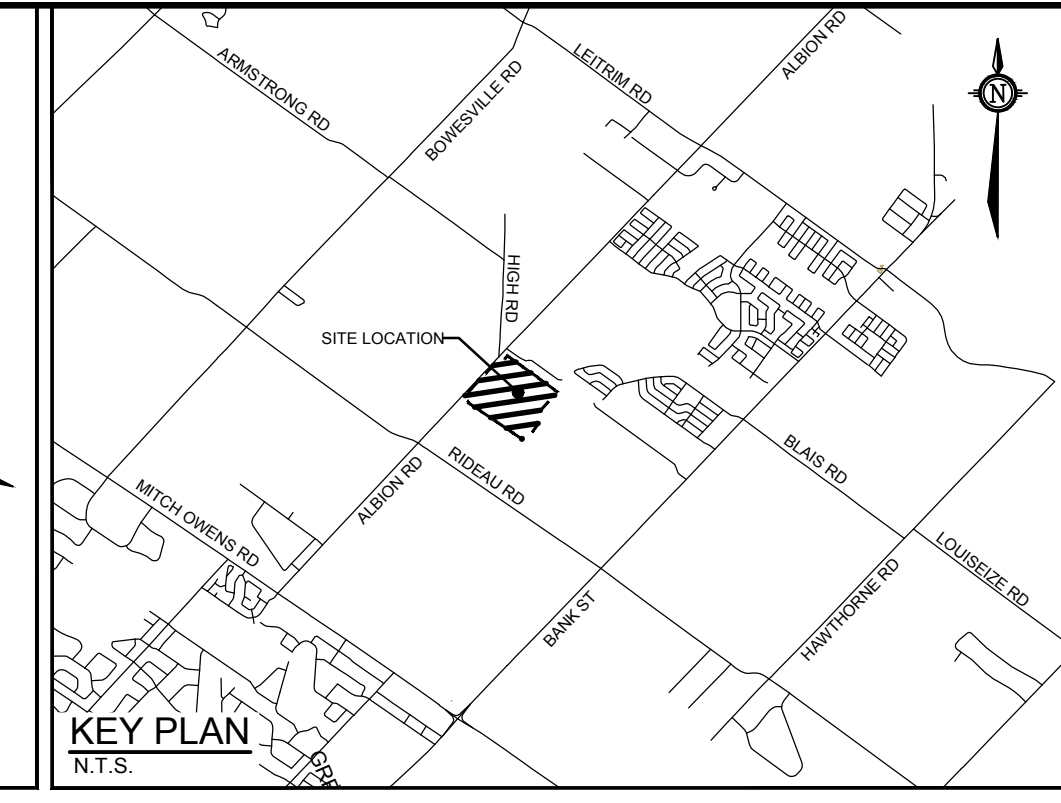
FOR REVIEW ONLY	DATE	BY
CHECKED		MJH
DRAWN		CJR
CHECKED		MJH
APPROVED		CJR
		JLS



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LOCATION 4837 ALBION ROAD, CITY OF OTTAWA HARD ROCK OTTAWA	PROJECT NO. 116111
DRAWING NAME GRADING PLAN NORTH-EAST DEVELOPMENT	REV # 5
	DRAWING NO. 116111-GR4

D07-12-19-0191



- LEGEND**
- PROPERTY LINE
  - PROPOSED SWALE
  - TERRACING 3:1 SLOPE MAX (UNLESS OTHERWISE INDICATED)
  - - - - PROPOSED DITCH CENTERLINE
  - ☒ PROPOSED FILTER BAGS AT CATCHBASINS, CATCHBASIN MANHOLES AND TRENCHDRAINS
  - MM PROPOSED MUD MAT
  - PROPOSED FENCE REFER TO LANDSCAPE PLAN
  - LIGHT DUTY SILT FENCE (OPSD 219.110)
  - PROPOSED STORM MANHOLE
  - PROPOSED CATCHBASIN MANHOLE
  - PROPOSED CATCHBASIN
  - ▾ PROPOSED BUILDING ENTRANCE
  - ▬ STRAWBALE CHECK DAM (OPSD 219.180)
  - ▬ RIP-RAP
  - ▬ EXISTING RIP-RAP
  - STM MH EXISTING STORM MANHOLE
  - CB 1 EXISTING CATCHBASIN
  - ▬ EXISTING INFILTRATION CHAMBERS
  - LS EXISTING LIGHT STANDARD
  - EXISTING FENCE

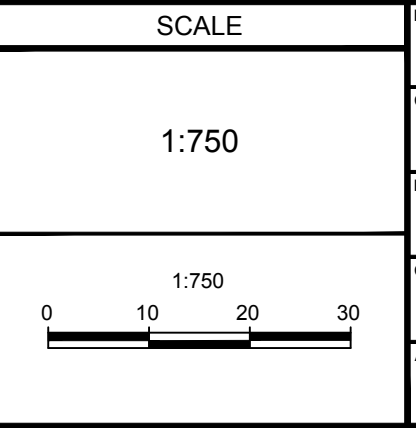


REFER TO 116111-ND FOR ADDITIONAL NOTES

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1	ISSUED FOR SITE PLAN APPROVAL	NOV 20/19	CJR



FOR REVIEW ONLY

DESIGN: MJH  
CHECKED: CJR  
DRAWN: MJH  
CHECKED: CJR  
APPROVED: JLS



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LOCATION  
4837 ALBION ROAD, CITY OF OTTAWA  
HARD ROCK OTTAWA

DRAWING NAME  
EROSION SEDIMENT CONTROL PLAN

PROJECT NO.	116111
REV	REV # 5
DRAWING NO.	116111-ESC

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